ELECTRICAL Wholesaling

THE INDUSTRY'S SALES & MANAGEMENT MAGAZINE

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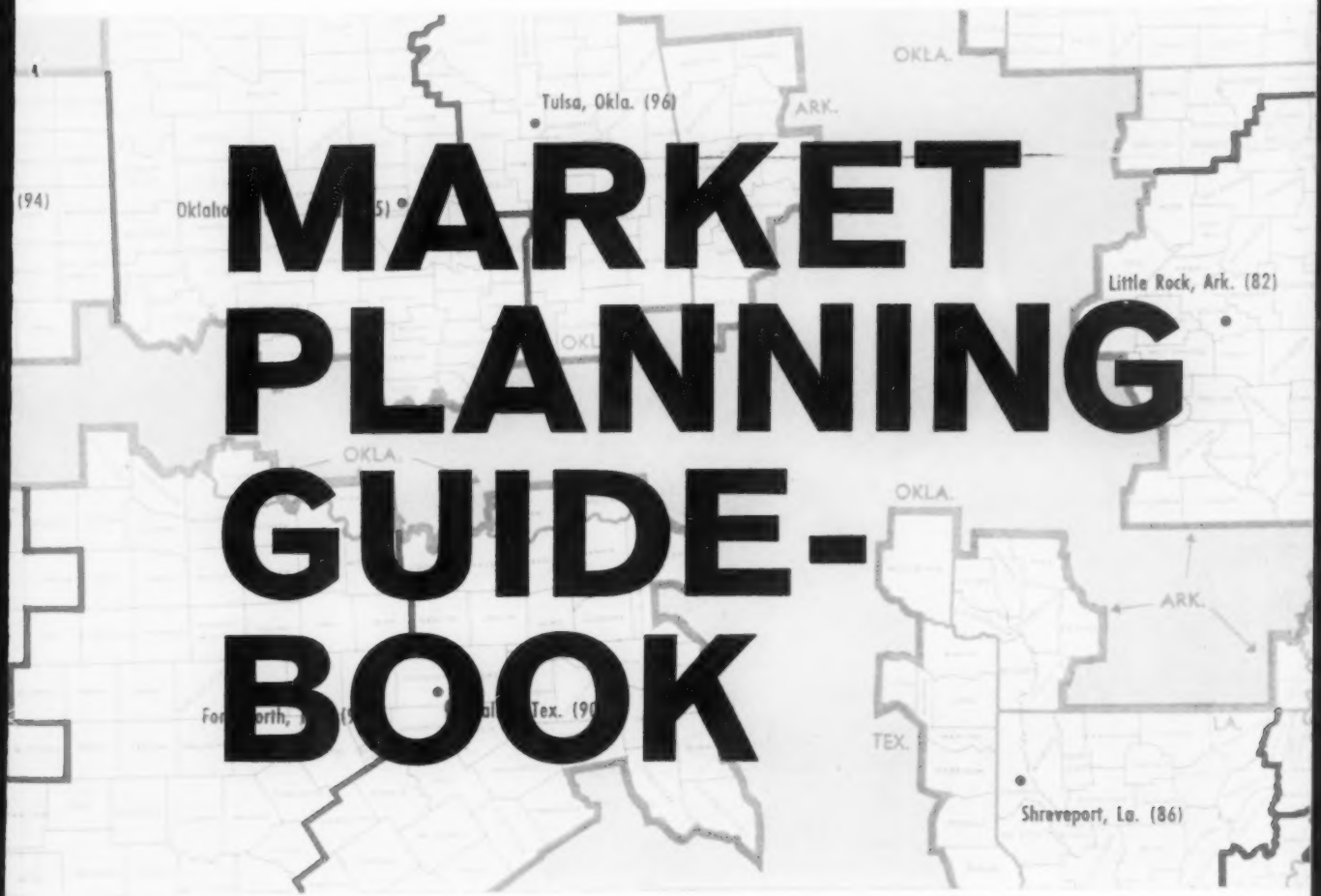
APRIL · 1961

NAED Convention Issue



MARKET PLANNING GUIDE-BOOK

Covering how to • Determine your market potential and position • Organize your sales force for the most efficient coverage • Maximize your sales to present and new accounts • Pinpoint product sales opportunities

page 85

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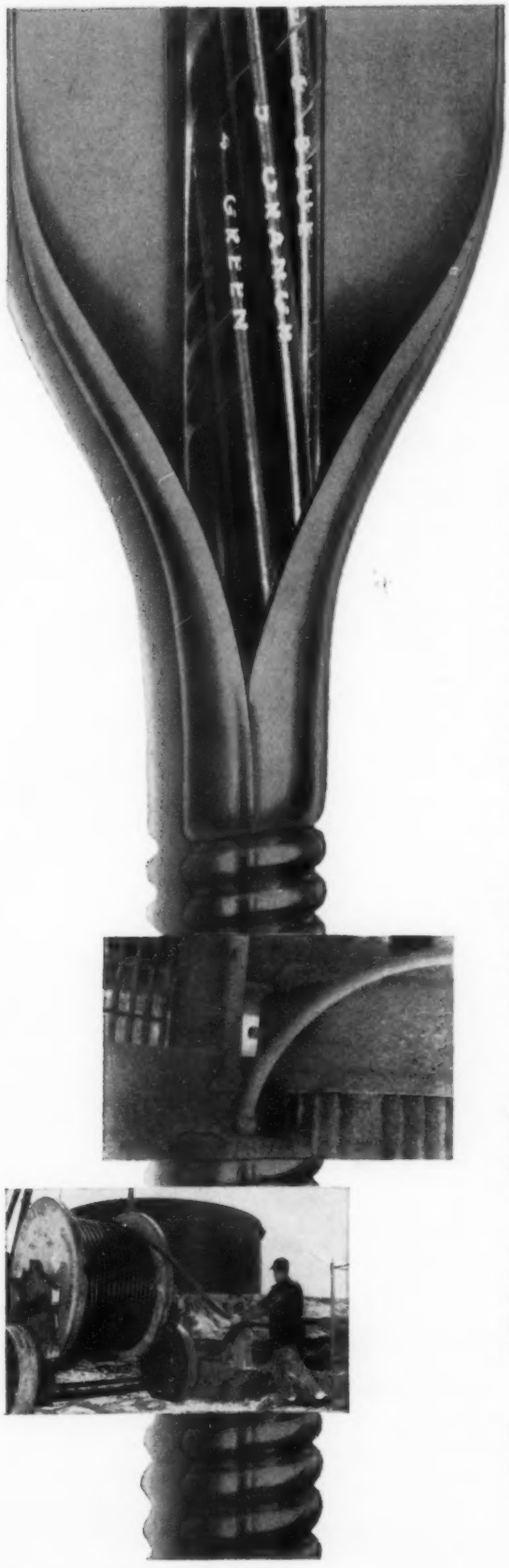

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April, 1961

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We're looking forward to seeing you at the NAED Convention in Detroit.

Sincerely,

Bill

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Manager, Distributor Relations

WJM:am

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14,025

APRIL 1961

ELECTRICAL Wholesaling

THE INDUSTRY'S SALES & MANAGEMENT MAGAZINE

Further comments on a continuing situation . . . .

Here are some "how to's" for all . . . . . .

Automation can be a sales stimulation . . .

Major markets report . . . . . .

FEATURES

Times and Trends: "A Plan For Market Development," "Double Standard For Price Fixing" and "In Praise of Profit" 6
Three subjects of special interest to distributors.

Market Planning Guidebook 85
1. DETERMINING YOUR MARKET POTENTIAL AND POSITION 86
2. ORGANIZING YOUR SALES FORCE FOR MOST EFFICIENT COVERAGE 90
3. MAXIMIZING YOUR SALES TO PRESENT AND NEW ACCOUNTS . . 94
4. PINPOINTING READY PRODUCT SALES OPPORTUNITIES 106
A 32-page special report that will assist you in determining your market potential for both products and customers.

Self Management Program Brings Areas Into Balance Robert S. Bush 117
Dauphin revamped its areas and accounts into realistic and profitable lines.

Machine-Made Sales Analysis Gives Key to Profit Potential Howard J. Emerson 120
Savasta salesmen get a guide to better accounts and profits.

Making the Most of a New House Opening 123
Timing, showmanship, introduce Fife's new service operation.

The Salesman's Technical Notes . . . . J. F. McPartland, W. J. Novak 126
The subject this month: Basic Circuit Study.

Profit Is Not A Dirty Word . . . . . Paul E. Bowers 128
A manufacturers' agent makes a case for making money.

Detroit Set for NAED Meet 138
A distributor-guide to food, fun and frolic in the Motor City.

How's Business So Far in '61? 156
Distributors report a slow first quarter and see a Spring pick-up.

NEXT MONTH

"Speeding Up Communications—Inside and Out" gives a depth report of how one distributor streamlined service with two types of communication systems.

DEPARTMENTS

Credits and Collections 4
Top of the News 8
New Products 10
Business Index 135
News for the Industry 137
NAED Program 150
Calendar of Events 174
Marketing Aids 176
Business Report 180
People in the News 184
New Literature 186
Manufacturers' Expansions 188
Obituaries 196

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APRIL 1961

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Credits and Collections

A CONVENTION issue, such as the one you are now reading, is usually tough to put together.

It requires a bit more of everything—planning, time, effort and considerable scurrying around by all on the staff.

But the end-product, we feel, is more than worth the effort in dividends it pays you.

The main feature of this issue is a case in point. Starting on *page 85*, you will find the first **Market Planning Guidebook** ever written specifically for you. Whether you're in sales or management, we're sure it will prove invaluable in getting a larger share of the right kind of business—the really profitable potential in your market area.

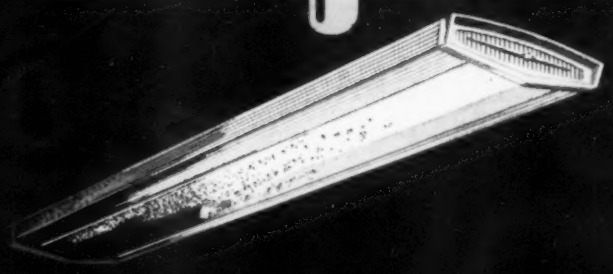
This 32-page special report is broken down into these four basic sections:

- **"Determining Your Market Potential and Position"**—*page 86.*
- **"Organizing Your Sales Force for Most Efficient Coverage"**—*page 90.*
- **"Maximizing Your Sales to present and New Accounts"**—*page 94.*
- **"Pinpointing Ready Product Sales Opportunities"**—*page 106.*

Following the report are two outstanding case studies detailing the proven steps taken by two progressive distributors (*pages 117 and 120*) toward developing market potential. You'll find much more inside!

Harking back to the headaches of publishing the convention issue, one of our major problems was obtaining clearance for reproduction of a map for the cover and *page 85*. **We'd like to thank the National Electrical Manufacturers Association for use of their 121 industrial trading areas map.**

BENJAMIN



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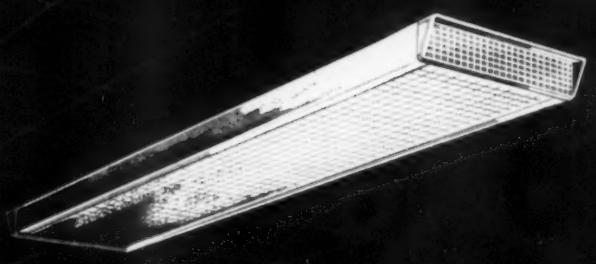
We're proud to offer two of the most distinguished designs available in the market today. Benjamin know-how has combined superior engineering and maximum lighting efficiency in smart, slim fluorescent fixtures, that add the note of distinction to any office or commercial installation. Dramatically decorative . . . competently functional.

No visible metal supports. Can be mounted singly or in continuous unbroken line. Variety of light-diffusing lenses for any purpose. Two or four lamp. Forty-eight inch lengths.

The Incomparable CORONADO

Here is the latest development in controlled lighting—3 in 1 lens—snap-in wiring channel—only 2½" deep—two types of lens. Designed for surface mounting for all types of commercial lighting—offices, schools, banks and other interiors that require high quality illumination, realistically priced.



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Today's most copied commercial fixture. Its beauty of design and universal adaptability make it the number one choice of architects and consulting engineers. Selected by contractors for its ease of installation. In either prismatic lens or plastic louvers, this unit has no equal.

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A Plan for Market Development

Flying by the seat of one's pants is a standard business approach. While this method (or lack of it) relies to some extent on historical experience and, hopefully, on mature judgment, its main element is trusting to luck. What's lacking is A Plan. The focus, consequently, is too much on day-to-day.

Flexibility, as embodied in this approach, will continue to be one of the strong points of small business. But as a small business grows, then planning must come into the picture—planning that encompasses and integrates every phase of the business, short-range and long-range.

One of the more important areas of planning is market development. Markets must be analyzed for their potential sales and profit returns, today and tomorrow. It is wasteful, for example, to wake up to the fact one day that a product or market is dead and that you have no choice but to get out. This probability might have been determined well in advance and a transition effected to something better before the old horse just rolled over and died.

As part of our annual NAED Convention issue, the editors of ELECTRICAL WHOLESALING have prepared a Market Planning Guidebook (*page 85*). The key idea behind this special section is that any electrical distributor can determine his market potential and position and use this information to formulate a marketing plan. Likewise, any salesman can do a more effective job of evaluating the potential of his accounts and acting on this evaluation.

Double Standard for Price-fixing

"When *I* use a word," Humpty Dumpty said, in a rather scornful tone, "it means just what I choose it to mean—neither more nor less." *Through the Looking-glass,* by Lewis Carroll

The inconsistencies in our official attitude toward price-fixing are appalling. The double standard that prevails was demonstrated in mid-March with the passage of emergency feed-grain bills by the House and Senate and the announcement of increases in price supports for dairy products, rice and peanuts. The second move alone is expected to raise farm income by $2 billion this year, although price increases to be passed along to the consumer are viewed, officially, as "extremely nominal."

Presumably, this extra $2 billion will be extracted from someone. Guess who? The same fellow who already has footed the bill for mountainous surpluses of farm products—you (and me). In no way are we to be permitted to obtain the benefits of a freely operating farm economy. Rather, we are at the mercy of political and bureaucratic decisions to manage production and fix prices.

One can only ask: what makes it legal to fix prices in one sector of our economy and illegal in another? The only answer, cynical and jaundiced though it may sound, is powerful lobbies.

One can also ask: how can the government call the multi-billion-dollar consequences of one form of price-fixing "extremely nominal" and characterize those of another—the electrical conspiracies—as having "probably milked the American people out of more money than any scheme since the Teapot Dome oil scandal of the 1920s?"

The answer is that price-fixing is a Humpty Dumpty word; it means what the government chooses it to mean—a benefit on one hand and a crime on the other. If this kind of inconsistency were only a matter of semantics, it might not be worth mentioning. But drastic penalties already have been imposed on some who participated in the "wrong" form of price-fixing, and a damage-suit vendetta is in the making.

In Praise of Profit

There is such a profusion of claptrap in print and on the air these days that when one comes upon common sense, it acts as a restorative and head-clearer. Such was the case when a manuscript came in the mail from Paul E. Bowers, a manufacturers' agent in Buffalo, N.Y. Titled, "Profit Is Not a Dirty Word," Mr. Bowers' piece, with wit and candor, makes a case for making money. Some typical Bowersisms:

- **"I doubt that anybody in the electrical industry really holds profit in contempt, but it would seem there are some who have little respect for it."**
- "There is absolutely no reason why electrical work should be so cheap. It is the most vital part of a structure (whoever heard of the plumbing setting fire to a building?)."
- **"A big order without profit can be like a hangover; all the fun is in getting it."**
- "Volume may be a necessary evil, but profit is a living virtue; without it, there is no living."
- **"I hope you grow to be as big as you wish, but only with a profit; otherwise you are a nuisance to the rest of us and, really, not much use to yourself."**

You might find Mr. Bowers' paean of profits helpful and head-clearing, too. It starts on *page 128*.

George Jansyn Muller

Editor

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FROM
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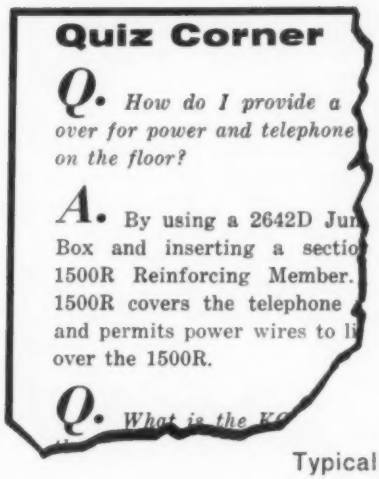
"ELECTRIC
IDEAS"


Quiz Corner
Q. How do I provide a over for power and telephone on the floor?
A. By using a 2642D Jun Box and inserting a sectio 1500R Reinforcing Member. 1500R covers the telephone and permits power wires to l over the 1500R.
Q. What is the K

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TOP OF THE NEWS . . . and its significance to you

Business Is Looking Up, And Picking Up!

"There is no question that we will have an upturn in the economy in April." These were the encouraging words last month of Labor Secretary Arthur Goldberg. Supporting this statement, the Federal Reserve Board released figures that industrial production in February held at 102% of the 1957 average. This was unchanged from the January level. However, it pointed to a halt of the downward drift of business, as it was the first month since last July in which industrial output showed no decline. The Census Bureau disclosed also that housing starts in February advanced for the second straight month.

Distributors Report Slow First Quarter

A general decline in sales and profits was recorded among the nation's electrical wholesalers for the first three months of '61, as compared to the same period of last year. However, sales were picking up, and the outlook was brighter as EW went to press. For the full story see *How's Business So Far in '61* on page 156.

Government Asks $12 Million Damages

The Justice Department has filed what is considered to be the first in a series of damage suits against electrical equipment manufacturers, in the wake of recent antitrust convictions. **In this initial civil action, five government agencies and the Tennessee Valley Authority have asked for about $12 million in damages from General Electric Co., Westinghouse Electric Corp., Allis-Chalmers Mfg. Co., Federal Pacific Electric Co., and I-T-E Circuit Breaker Co.**

Government Watching Identical Bids To TVA

The federal government has announced two cases of identical bids in the cement and aluminum industries, to the Tennessee Valley Authority. Sources within TVA hint that the Justice Dept. and the Federal Trade Commission may soon start a full-fledged investigation.

Utilities Study Price-Fixing Costs

A committee of lawyers representing 80 utility companies are collecting information and analyzing prices charged for equipment by electrical equipment companies fined for antitrust violations. George D. Gibson, general counsel for the Virginia Electric and Power Company, has been named to head the committee.

California's Buy America Act Upheld

A bill which would have repealed California's Buy America Act has failed to survive its first legislative test. The state assembly governmental efficiency and economy committee rejected the bill at its first hearing. Assemblyman Thomas M. Rees (D) of Beverly Hills, who supported the proposed bill, said, **"Imports do keep people honest in bidding and pricing."** He cited recent conviction of top officials of electrical equipment companies.

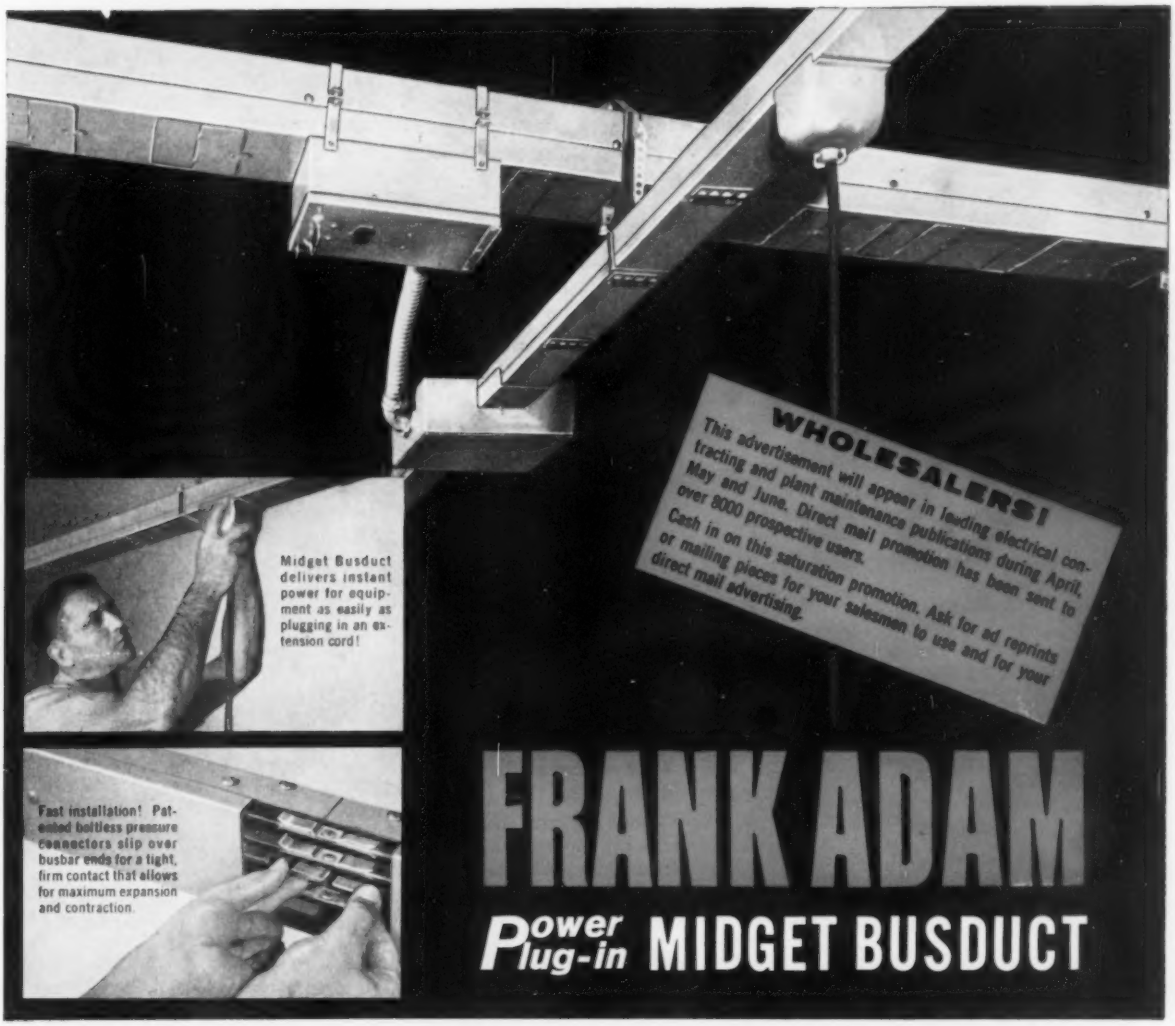
Court Kills Damage Suit

A $750,000,000 damage suit against the General Electric Company has been dismissed by a United States District Court. The suit was filed by several Peoria, Ill. residents asking triple damages for themselves and 50,000,000 other GE retail customers, resulting from recent antitrust actions.

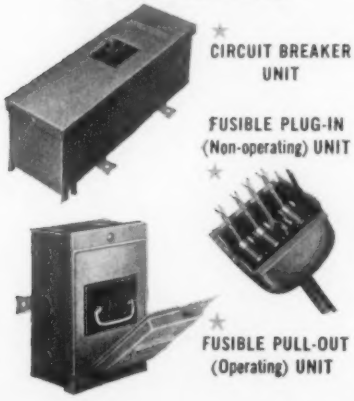
Acquisitions Announced

Pittsburgh Standard Conduit Co., Verona, Pa., has acquired the principal assets of the Houston Plastic Bonding Co., in Houston, Texas. **Oak Manufacturing Co.,** Crystal Lake, Ill. has acquired McCoy Electronics Co., Mt. Holly Springs, Pa. And **Paragon Electric Co.,** of Two Rivers, Wis. has announced its affiliation with American Machine & Foundry Co.

EXTEND ANY PRESENT BUSDUCT SYSTEM TO ANY SPOT IN THE PLANT FOR LESS THAN THE COST OF WIRE & CABLE!


Midget Busduct delivers instant power for equipment as easily as plugging in an extension cord!
Fast installation! Patented boltless pressure connectors slip over busbar ends for a tight, firm contact that allows for maximum expansion and contraction.
WHOLESALERS!
This advertisement will appear in leading electrical contracting and plant maintenance publications during April, May and June. Direct mail promotion has been sent to over 9000 prospective users.
Cash in on this saturation promotion. Ask for ad reprints or mailing pieces for your salesmen to use and for your direct mail advertising.
FRANK ADAM
Power Plug-in MIDGET BUSDUCT

CHOOSE FROM THREE TYPES OF PLUG-IN UNITS



100-Amp. plug-in power fed from existing busduct to any location with MIDGET BUSDUCT

Although the initial price of Midget Busduct is slightly more than wire and cable, the saving on labor alone results in a surprisingly lower installed cost.

No cutting or bending, no threading of conduit is necessary with Midget Busduct. It is 100% salvageable when plant layouts are changed, or machine relocations are made. Quick availability of plug-in units permits load connections in minutes to save even more on labor.

Either copper or aluminum conductors can be furnished. Midget Busduct has plug-in outlets every 10", on one or both sides, to accommodate three types of plug-in units, shown at left, in 30 to 100 amp. capacity. *Ask for complete information and prices.*

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NEW PRODUCTS

Heaters

Units are controlled beam, electric infrared type

Units have metal sheath, quartz tube or quartz lamp elements. Heaters designed with deep housing shells to contain and control heating effect in definite tight radiation pattern, according to manufacturer. Choice of heating elements provides custom-type application of heaters to various conditions. Eleven models from 8-in to 54 11/16-in available • **Edwin L. Wiegand Co., Pittsburgh, Pa.**

Conduit

Three types of conduit now available to distributors

Three types of conduit, electrical metallic tubing, rigid steel conduit and rigid aluminum conduit available. Steel conduit is hot dipped galvanized, with threads specially treated to prevent rusting. Both aluminum and steel conduit come with couplings attached and with color-coded plastic thread protectors. Aluminum type has special factory coating that reduces wire pulling, manufacturer says. • **Nikoh Tube Co., Chicago, Ill.**

Receptacle

Unit has riveted grounding contacts and terminals

Receptacle is 2-pole, 3-wire, 20-amp, 125-v duplex polarized grounding type. Suited for commercial and industrial applications. Configuration of receptacle face prevents insertion of parallel blade plugs. Offered in brown bakelite or ivorylite and supplied for side wiring and back wiring, or side wiring only, receptacle suitable for use with 4-in outlet box covers. • **The Arrow-Hart & Hegeman Electric Co., Hartford, Conn.**

Lampholders

Fluorescent type lampholders designed to save space

Type 593 lampholder is "wafer-thin" type, measuring 11/32-in thick and 1½-in high. Horizontal and vertical mounting bracket locking recesses in rear of unit permit single fastener mounting. Unit available with or without mounting brackets. Molded so that 2 wire leads may be brought out straight, to rear, or out each side, and still permit flush mounting. Available in black phenolic or white urea. May be supplied in factory-wired harnesses in 2, 3, or 4 units, ready for installation. • **Kulka Electric Corp., Mt. Vernon, N.Y.**

Exit Lights

Units offer choice of three lamp sources

New multi-mount "exits" offer choice of incandescent, fluorescent, or electroluminescent. In electroluminescent units, panel itself is source of illumination. Units feature "easy see" beveled face for quick recognition from normal viewing angle, maker says. Available in variety of mounting methods. Furnished with either cut-out metal letters or all-glass faceplates. • **Edwin F. Guth Co., St. Louis, Mo.**

Circuit Breakers

Features bolted construction for positive connection

New line of type NB molded case circuit breakers feature bolted construction to give positive connection between breaker and main bus. Lighting and power circuit breaker available in 1, 2, and 3 poles with ratings from 15 through 70-amps. Can be used as switching device and is designed for protection from overload and short circuit conditions. Interrupting rating: 5,000-amps, at rated voltage. • **Federal Pacific Electric Co., Newark 1, N.J.**

Load Centers

Suitable for use as service entrance equipment

Combination meter socket and plug-in load centers are within same raintight enclosure. Both surface and semi-flush types available, with and without main - breaker disconnects. Meter socket has lay-in type connectors with pressure plates. Steel barrier prevents access to line terminals of meter after installation. • **Murray Manufacturing Corp., Brooklyn, N.Y.**

Portable Heater

New fully automatic unit is electric forced-air type

Designated PAH-S, unit has built-in thermostat which provides completely automatic operation and control of heater. Safety-tilt switch automatically shuts off unit if accidentally knocked over. Unit weighs 9¼-lbs and is 12½-in high, 11½-in wide and 6-in deep. Operates on 120-v at 1,500-w. • **Edwin L. Wiegand Co., Pittsburgh, Pa.**

Power Pump

Portable 2-speed unit weighs 14-lbs

New miniature size, portable 2-speed hydraulic power pump is said to be capable of developing pressures up to 10,000-psi. Pump No. 1729 has automatic changeover to slow-volume, high pressure drive. Approximate pumping capacity is 80-cubic ins at 30 psi, 20 cubic ins at 100 psi, and 4 cubic ins at 10,000 psi. Unit develops 10,000 psi intermittent, 6,000 psi continuous. Designed as power source for hydraulic knockout punch drivers, rams, jacks, etc. Powered by built-in 115-v, ac-dc universal motor. • **Greenlee Tool Co., Rockford, Ill.**

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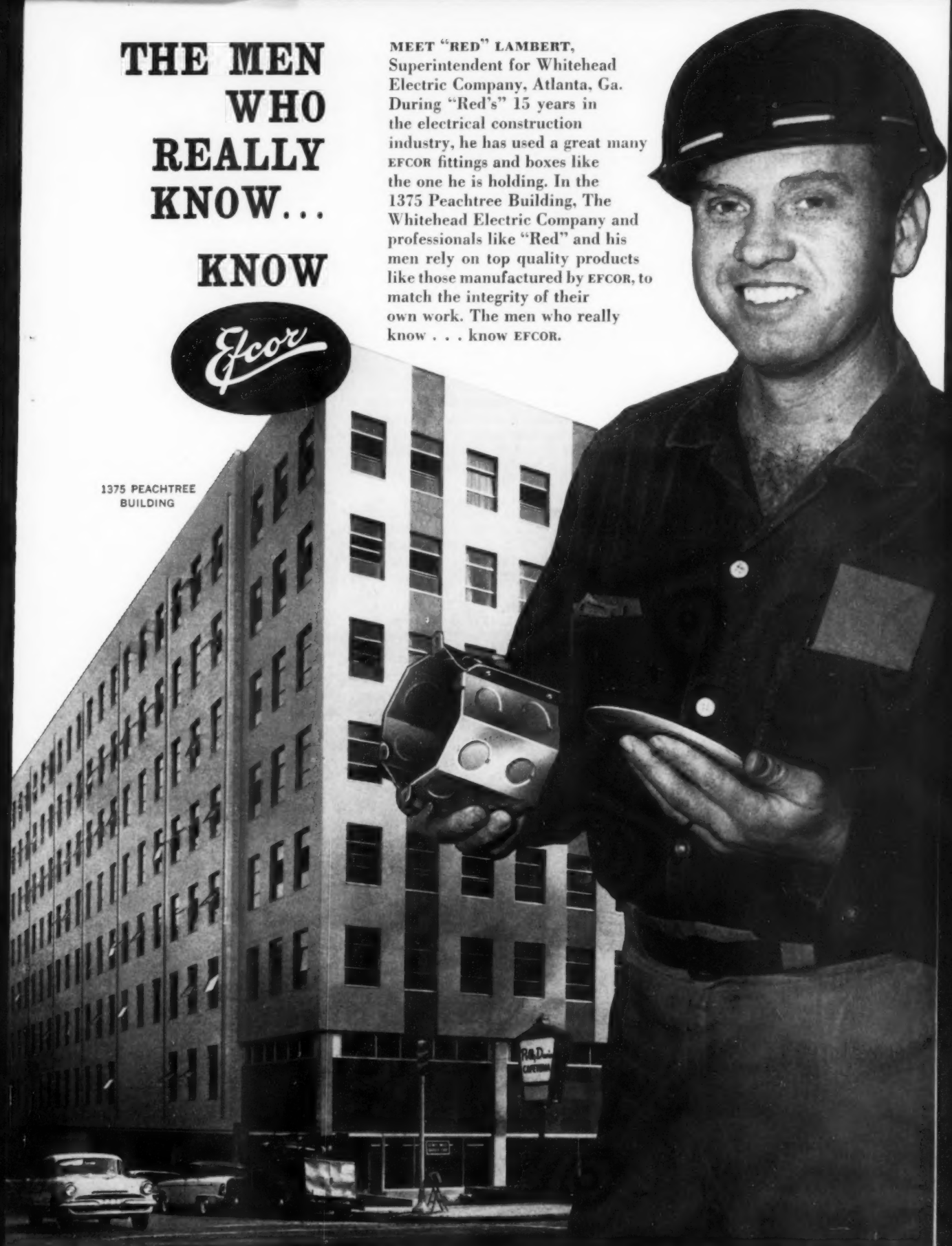


ELECTRICAL FITTINGS CORPORATION • WOODSIDE 77, N. Y.

Troffer

Light, cool or warm air provided from single unit

New concept in air-handling troffers called Triple-Shell Lumi-Flo provide light, cool air or warm air from single concealed ceiling fixture. Suitable for commercial use. Air passageway is isolated from troffer housing by fiberglass insulation and insulating air gap —thus removing possibility of temperature variations affecting light output of unit. Shallow depth of 4⅞-in. at ends of unit allows for clearance of beams and pipes in plenum. • **Benjamin Div., Thomas Industries Inc., Louisville, Ky.**

Panels

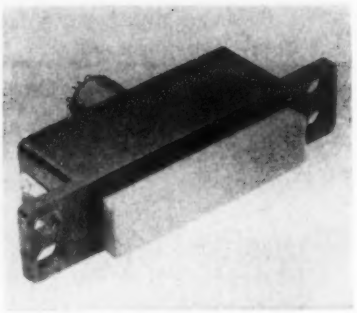
Line is weatherproof fusible pullout type

Hinged cover enclosures are made of galvanized steel finished with gray hammertone enamel. All units have welded hub on top, ample concentric knockouts in bottom, and provisions for padlocking. Suitable for 125-250-v single phase service with grounded neutral. Model 600A contains one 60-amp pullout and model 660A has 2 60-amp pullouts wired in parallel. Both can be converted to 30-amp service. 100A has single 100-amp pullout, while two 100-amp units wired in parallel are mounted in 110A. Model 200A has 200-amp pullout. • **Hoffman Engineering Corp., Anoka, Minn.**

Switch

Designed for use with environment-free switches

Complete unit with EF/136 switch has single pole, double throw circuitry, rated at 5-amps at 125/250-v ac, 2.5-amps at 30-v dc ind., or 4.0-amps at 30-v dc res. Switch features .250 min. overtravel, 4 oz. min. release force and movement differential of .004 max. • **Control Switch Div., Control Company of America, Folcroft, Pa.**



Switch-light

Intended for palm-of-the-hand actuation

Multipole momentary-contact bar switch-light has twin ballbearing actuator guides. Unit uses standard Pendar keyboard switch mechanisms available in contact arrangements as 1, 2, or 3PDT and 2, 3, 4, or 6PST. Rated at 28VDC, 2-amps resistive, switch mechanisms feature double-break non-snap silent action and are enclosed in gold anodized aluminum cases. Dimensions are: 4¾-in long x 1-in wide x 2¾-in deep. Available, plain, or engraved, in 4 standard colors; red, white, green and yellow. • **Pendar Inc., 14744 Arminta St., Van Nuys, Calif.**

Switch

Pushbutton type smaller than cubic inch

New miniaturized lighted push-button is smaller than 1-in cube. Measures .812 x .890 x 1.303-ins. Switch offers single or 2-color indication, with each half of divided display screen having its own individual light source. With 5 colors available for display screens, single switch can have any one of 15 color combinations. Switch contains 2 single-pole double-throw subminiature switch elements rated at 7-amps resistive and 25-amps maximum inrush at 24-v dc; 7-amps resistive and 15-amps inrush at 115/230-v ac. • **Micro Switch Div., Minneapolis-Honeywell Regulator Co., Freeport, Ill.**

Step Light

Electroluminescent unit designed for steps, walks, aisles

Called Rayescent Safety Step Light, unit is 2-dimensional in shape, permitting it to be mounted on existing stairways with little or no carpentry or alterations. Light measures 4- x 8-in, ½-in thick. Can be mounted nearly flush on existing stair risers. Estimated life 10,000-hrs. Consumption 1-w. Operates on 120-v or 240-v ac. • **Lamp Div., Westinghouse Electric Corp., Bloomfield, N.J.**

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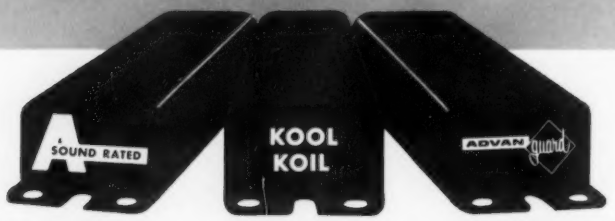

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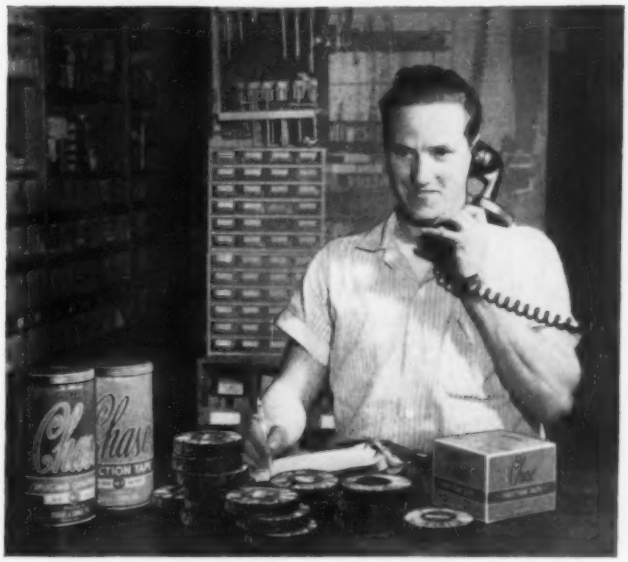

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Your profits

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G-E lamp franchise holders were the first to sell—and profit from—the following lamps because General Electric developed them first:

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T10-T10J Fluorescent—1959—a General Electric exclusive

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These are a few of the reasons why your G-E lamp franchise is among the most valuable you have. And General Electric intends to keep it profitable by providing you with:

1) top performance lamps at a fair price so you can build volume

comes up with most of the important new lamps

climb because new G-E lamps make it profitable for your customers to replace present systems

2) complete marketing programs, along with new lamps, that will stimulate lamp and allied product line profits

3) up-to-date sales policies to help you stay profitably competitive

Ask yourself: How much **more** total electrical sales volume and profit can I trace, over the past few years, to G-E leadership in distributor-oriented marketing plans and programs?

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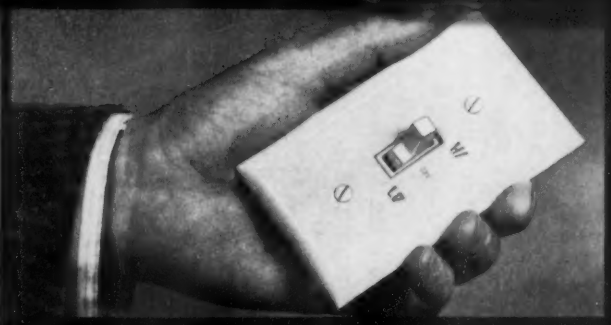

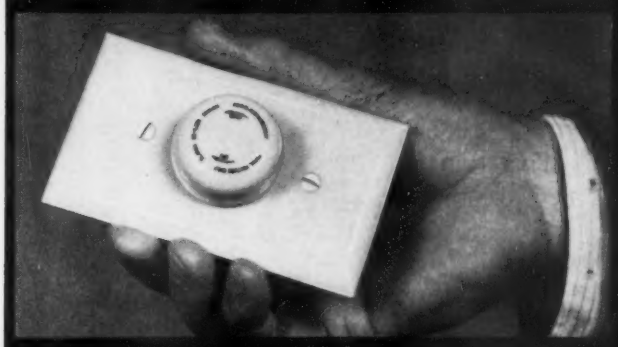

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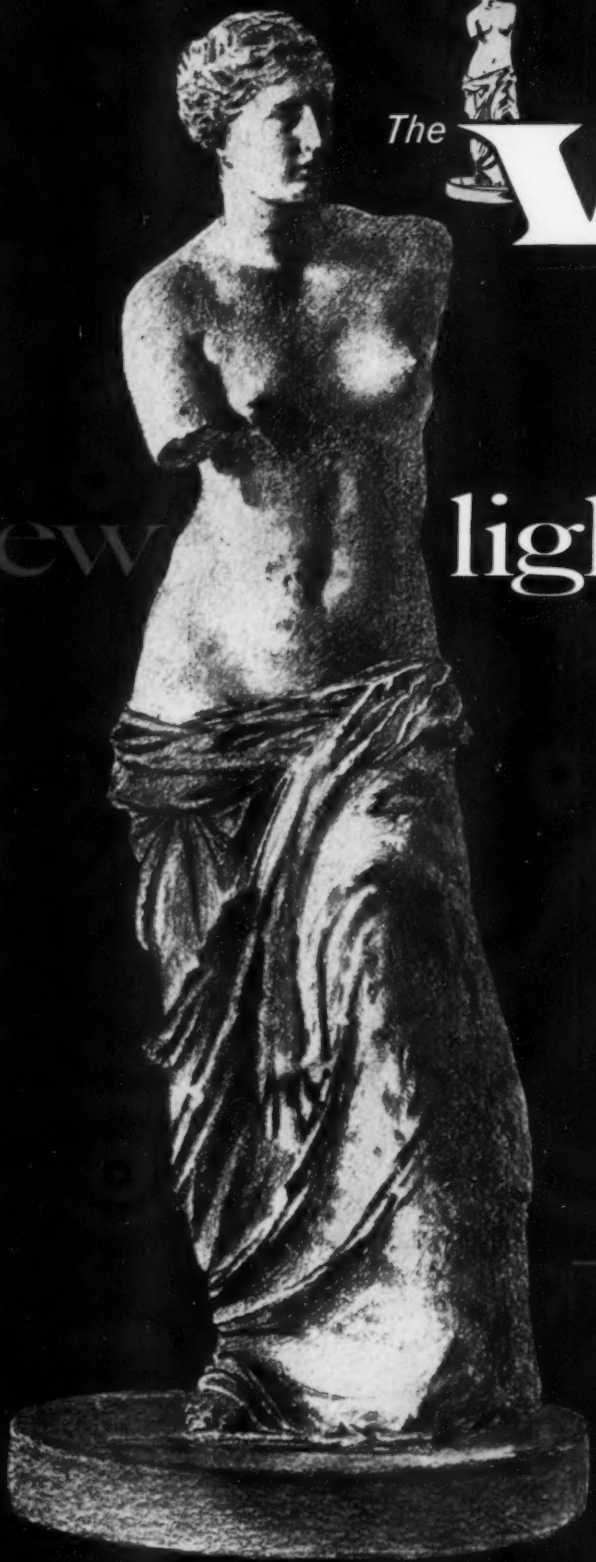

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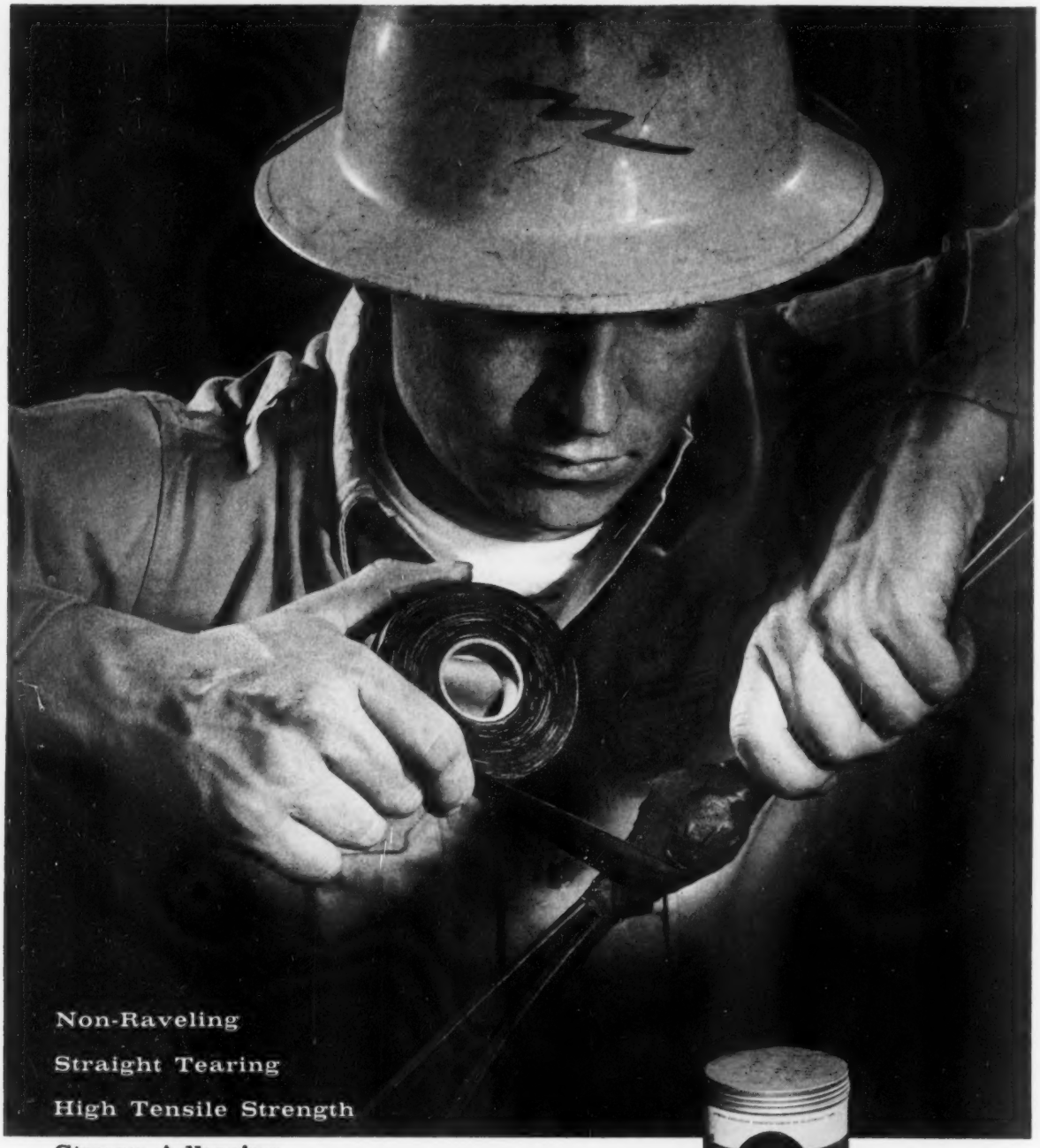

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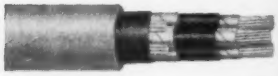

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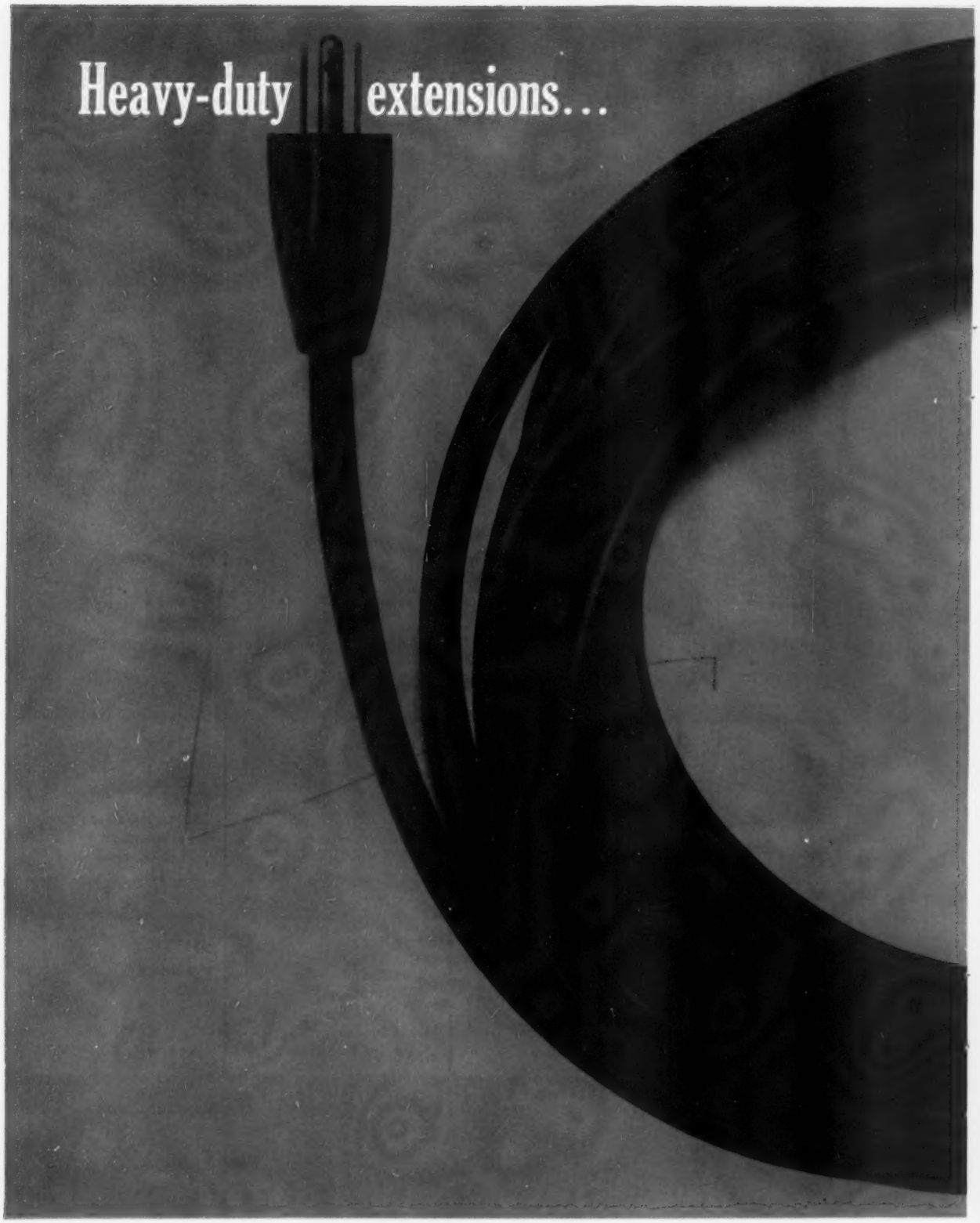

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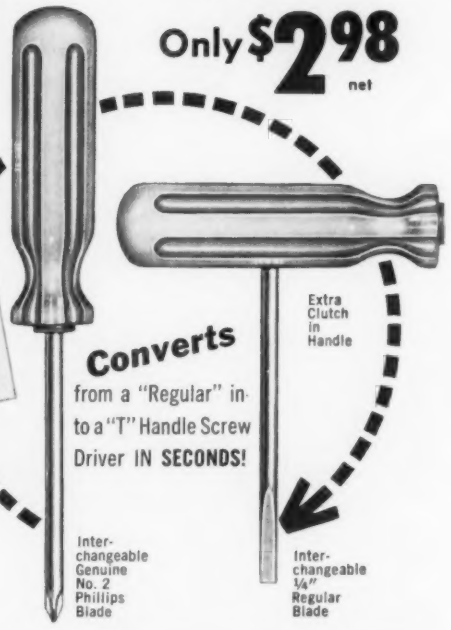
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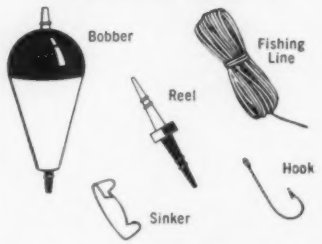

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Selected, authorized distributors will be protected in their specific marketing areas.

2. TECHNICAL ASSISTANCE
"On-the-spot" technical assistance by Rockbestos field engineers for specialized cable applications and recommendations.

How Rockbestos' new sales is helping distributors

One of the six important contributions Rockbestos makes to the distributor's operation is technical assistance. Shown here, a Rockbestos field engineer in company with the distributor, provides on-the-spot assistance in solving a customer's cable problem. Backing him up at the Rockbestos plant there is a staff of research and development engineers as well as a cable design department whose function it is to develop cable constructions involving unusual service requirements.

3. AGGRESSIVE SALES PROMOTION
Rockbestos customer-aimed advertising–backed by direct mail, catalogs, brochures, etc.–directs customers and prospects to you.

4. PROTECTED DISCOUNTS
Rockbestos guarantees its authorized distributors full protection on all business they develop.

5. DISTRIBUTOR SALES TRAINING
We welcome the opportunity to train your men on applications and sales techniques for profitable selling of Rockbestos products.

6. TOP QUALITY PRODUCTS
Rockbestos' most important asset is the universal recognition of the quality of its products . . . a reputation we will maintain and improve.

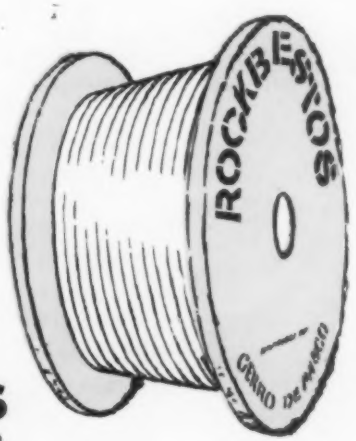
policy...
sell wire and cable

A few short months ago Rockbestos published a distributor sales policy, to our knowledge, the first of its kind in its field. Its objective: to expand the Rockbestos distributor organization.

Trade reaction has been gratifying–supporting our conviction that today there is an ever-growing number of distributors who recognize that a truly profitable relationship rests on *mutual cooperation.*

Published here are the six points upon which Rockbestos' distributor sales policy rests. If you're the kind of distributor who looks for this kind of assistance from the manufacturers you handle, there'll most likely be a Rockbestos man around to see you soon.

Or, if you'd like to talk about it sooner, get in touch with us. Contact the Rockbestos man nearest you or write directly to our executive offices. Rockbestos Wire & Cable Co., Nicoll and Canner Streets, New Haven, Connecticut.



See you at the
NAED Convention
Detroit, April 30 to May 3rd

ROCKBESTOS
WIRE AND CABLE CO.
a division of CERRO DE PASCO CORPORATION

Asbestos-Varnished Cambric, All-Asbestos, Varnished-Cambric, Thermoplastic and Silicone Rubber Insulated Wires and Cables

completely NEW FARADAY FIRE ALARM SYSTEMS

As pioneers in the signaling industry, Faraday proudly announces their completely new Fire Alarm Systems, incorporating modern functional design.

New modular control panels—"pre-engineered" to provide greater flexibility to meet a wide variety of typical specifications—coded or non-coded. All factory inspected and Underwriters' Laboratories listed.

New call stations, attractively designed to blend with modern architectural decor, are simple to operate. Exclusive "Alerto-Glass"* feature silently commands attention.

There's a standard Faraday System to meet your individual requirement. For further information, send for the new Faraday bulletins or, if desired, a representative will gladly call.

FARADAY

*Trade-mark

Adrian, Michigan

THERE **IS** A DIFFERENCE IN I·T·E UNI-PAK LOADCENTER **INTERIORS**

NO MONKEY WRENCH BOLTS!

I-T-E INTERIORS HANG LIKE PICTURES

No damaged interiors when you install I-T-E Uni-Pak Loadcenters!

First, you fit the 14¼" Uni-Pak box snugly between studs and secure it. The rest is easy. You merely "hang" the interior as you would a picture. Neat and fast! Next, add trim . . . and job's done!

I-T-E puts box, interior, and trim in separate packages. You install separately. Result? Maximum flexibility! Every Uni-Pak Loadcenter box will hold a variety of fusible *or* circuit breaker interiors. Example: the 24-inch box will take any one of 58 choices according to your needs.

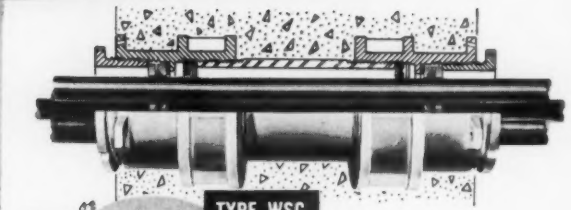
Get all of the facts. Write I-T-E Circuit Breaker Company, Walker Division, 125 Bennett Street, N.W., Atlanta 9, Georgia. Ask for Bulletin D-64.

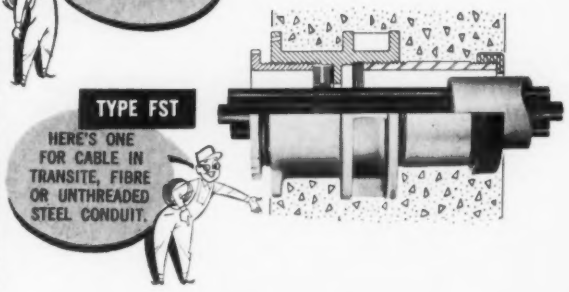
The HEART of HOUSEPOWER ⚡ Nerve-Center of The Medallion Home

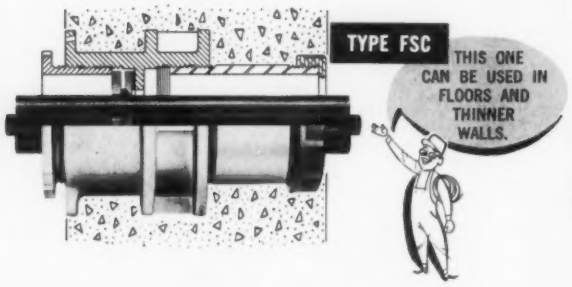
I-T-E CIRCUIT BREAKER COMPANY
WALKER DIVISION

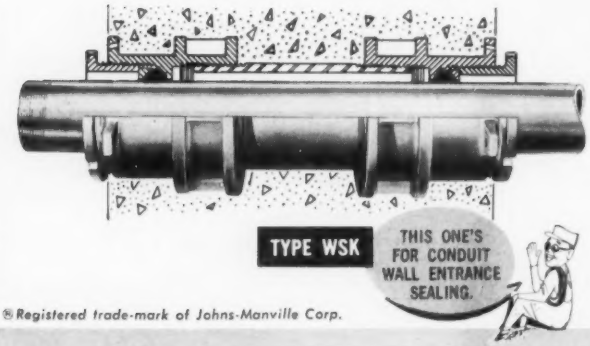
NEW! a complete line of O.Z. WATERTIGHT ENTRANCE FITTINGS for Conduit or Cable

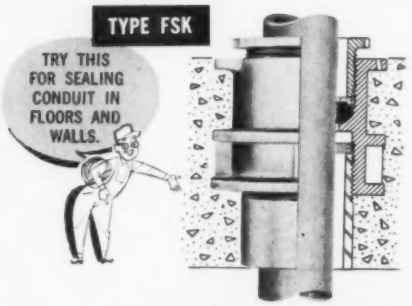
End leakage problems once and for all! O.Z.'s new wall and floor entrance fittings for installation in concrete provide a positively watertight seal around conduit or cable at any pass-through point! Use them with threaded or unthreaded steel conduit, fibre or Transite® conduit, or exposed cables of varying number and sizes. Gland-type sealing assemblies, with pressure bushings, may be tightened at any time. Fittings accommodate conduit ranging from ¾" to 6". Standard types, sizes available from stock. Specials made to order.











® Registered trade-mark of Johns-Manville Corp.

For more information on fittings and other O.Z. products, call your local distributor, or write to the company.

Copyright 1960 O.Z. Electrical Manufacturing Co., Inc.

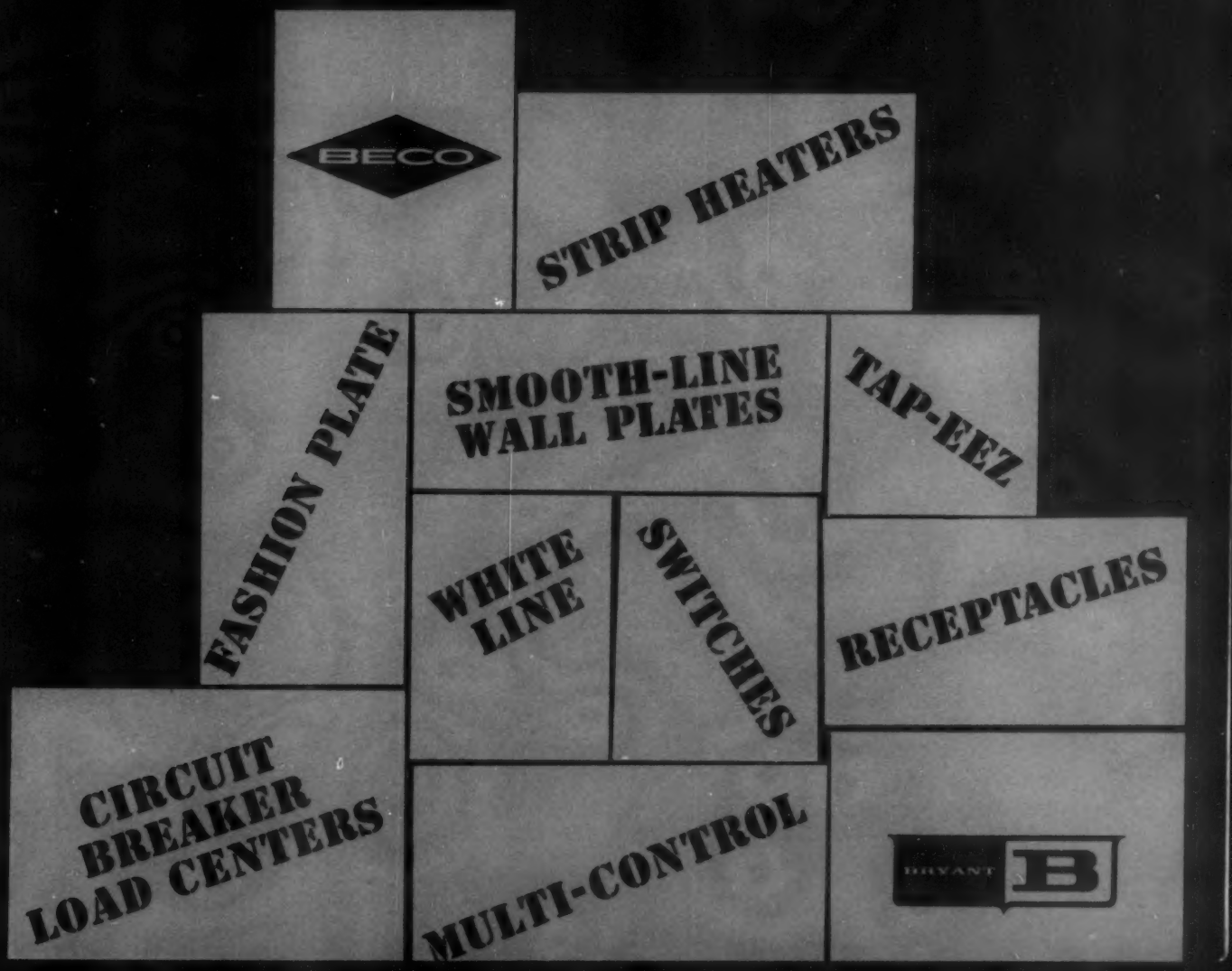
O.Z. ELECTRICAL MANUFACTURING CO., INC.
262 BOND STREET • BROOKLYN 17, N. Y.

- CAST IRON BOXES
- CABLE TERMINATORS
- POWER CONNECTORS
- SOLDERLESS CONNECTORS
- GROUNDING DEVICES
- CONDUIT FITTINGS
- INTERLOCKED ARMOR CABLE FITTINGS

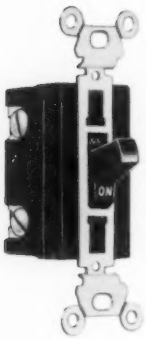
Sales Office and Warehouse: 406 So. Cicero Avenue, Chicago 44, Ill. • ESterbrook 9-0326
Office and Factory: 749 Bryant Street, San Francisco 7, Calif. • GArfield 1-7846

BUY ALL BRYANT

... and reach both of your "big two" markets with one electrical products package ... from one top-name source ... Bryant!

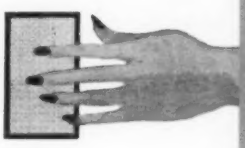


NOW, a full line of electrical products from one manufacturer. With one-source buying—all Bryant—you get the benefits of quantity discounts and weight allowances. You also reduce your bookkeeping and re-ordering expenses. And you can hit both your markets—the residential market and the commercial / industrial market—with the All Bryant Products Package.



SWITCHES—AC, Mercury or AC-DC. Available in brown and ivory—and ask about the White Line.

FASHION PLATE* SWITCHES—The best looking wall switches in the business. The unique AC Switch design insures positive, quiet action.



TAP-EEZ* SWITCHES—Smart styling, rugged durability, easy to maintain. Available in 15 and 20 Amp.

RECEPTACLES—Combinations for every application. Convenience outlets—15 and 20 Amp—and a complete line of grounding receptacles. Available in brown, ivory . . . and the White Line.

SMOOTH-LINE WALL PLATES—Plastic wall plates—new, decorator-inspired design. Available in brown, ivory or *pure white*, a Bryant first.

BRYANT B

BECO* – Now, for the first time, a complete line of *economical* wiring devices backed by the reputation of a *top-line* manufacturer. Brown, ivory ... and a White Line, too.

CIRCUIT BREAKER LOAD CENTERS – A full line ... 2-42 circuits ... 40-200 Amp ... 1-phase and 3-phase. With the best duplex breaker in the business ... the Bryant BR.

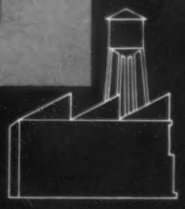
MULTI-CONTROL – Up to nine circuits controlled from one point! Complete line of master and station switches, relays and transformers.

STRIP HEATERS – With a Bryant exclusive – rigid, double channel sheath construction to resist warpage from continued heating and cooling.

WHITE LINE – A Bryant first ... pure white devices. Ivory has passed for white long enough. A wide selection of switches, receptacles, wall plates ... and Fashion Plate.

BRYANT B

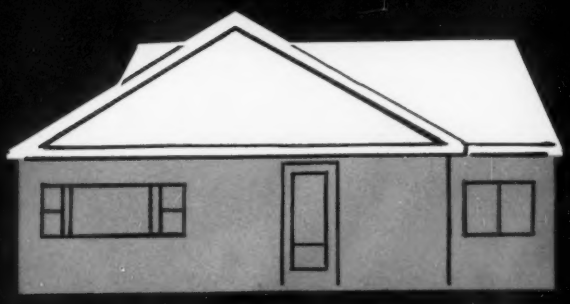
HIT BOTH YOUR MARKETS



Market #1: Industrial, commercial, custom-residential

Market #2: Residential, bid jobs, tract and speculative builders

*Registered trade marks of The Bryant Electric Company

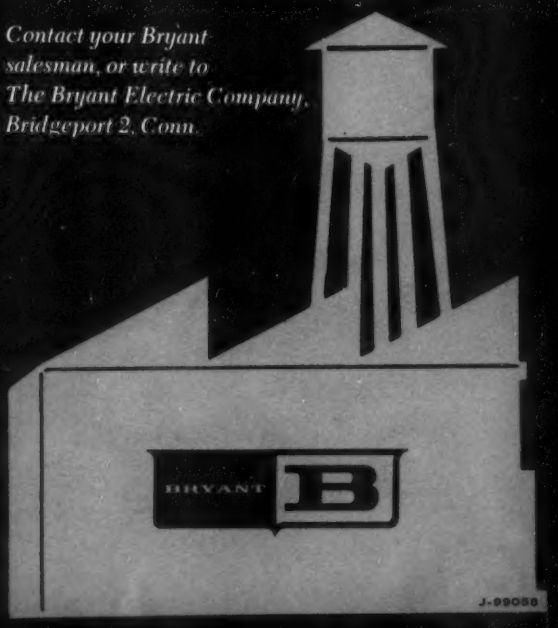


ONLY BRYANT CAN GIVE YOU ALL THIS!

▪ Two-market flexibility with one-source buying ▪ A brand name and acceptance second to none ▪ Prestige, quality *and* economy across-the-board ▪ More advanced features than any other line ▪ The most complete line in the field ▪ Promotional support . . . with new catalogs, hard-selling ads, mobile displays, sales literature ▪ Continuous flow of exciting new products to broaden your market and boost your profits.

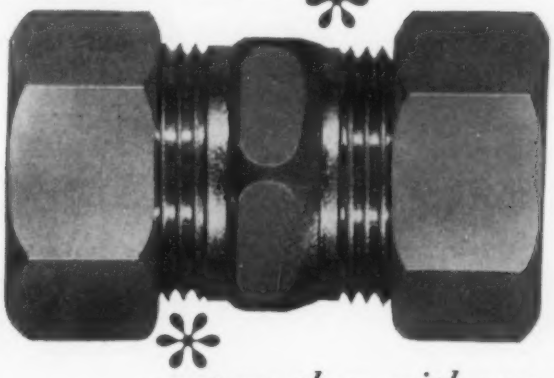
YOU'LL FIND IT PAYS TO BUY ALL BRYANT

Contact your Bryant salesman, or write to The Bryant Electric Company, Bridgeport 2, Conn.



COMPARE*
BLACKHAWK QUALITY

See and feel full, perfect threads



compare them with any on the market

Your customers will appreciate the difference

Blackhawk EMT fittings have full, true, perfect threads for ease and speed of installation. Bodies of heavy steel or malleable iron – cadmium and zinc finished to eliminate corrosion on the unit itself. Blackhawk's new EMT fittings are rain tight. Quality controlled at every phase of the manufacturing. Available in a complete range of sizes.

Find out why these small, easy to use fittings can save your customers time and money on any electrical job.

SEND THIS COUPON TODAY

COMPARE SEND FOR YOUR FREE SAMPLE TODAY!

Blackhawk Industries Box 708 Dubuque, Iowa Dept. EW 41

Please send my free sample of Blackhawk fittings.

Name _____

Address _____

City _____ State _____

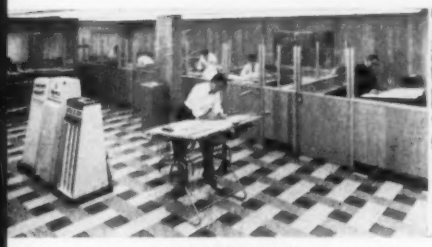
Blackhawk Industries

Blackhawk Industries, Dubuque, Iowa

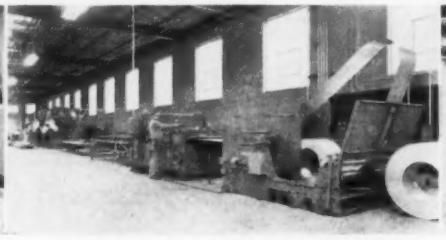
Where the new ideas come from

Introducing...

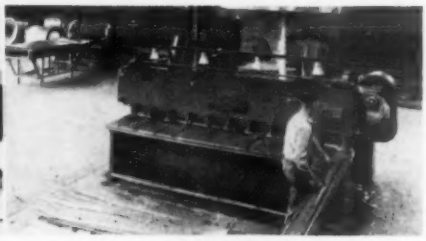
THESE MODERN FACILITIES ARE AT YOUR DISPOSAL



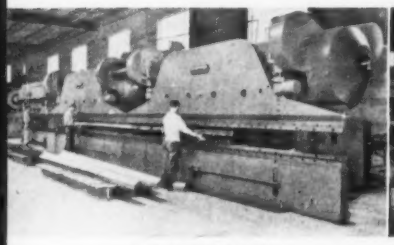
ENGINEERING



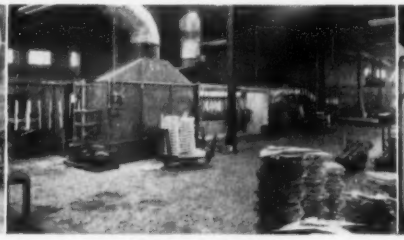
DECOILING — PRIMARY SHEAR



SHEARING

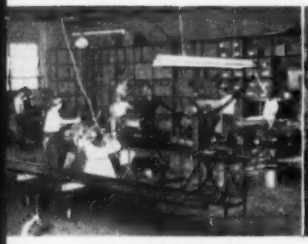


PRESS BRAKE

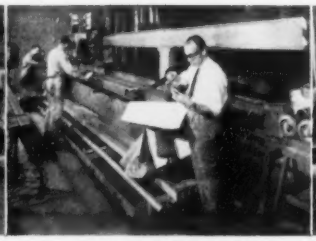


METAL FINISHING

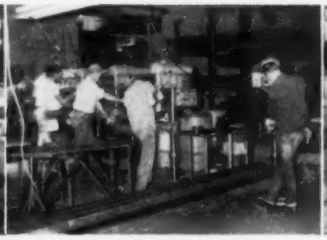
PAINT SPRAY OPERATION



POLE FORMING

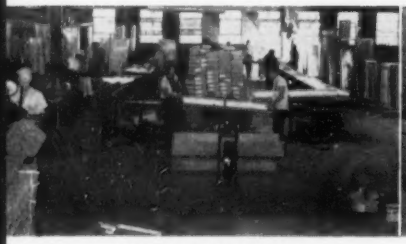


POLE WELDING



DRILLING

DOOR ASSEMBLY



FINAL ASSEMBLY

PACKING

PORTION OF MAIN WAREHOUSE

GENERAL OFFICE

ADVERTISING

PRINTING

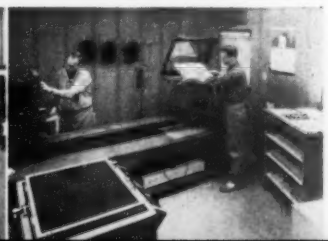
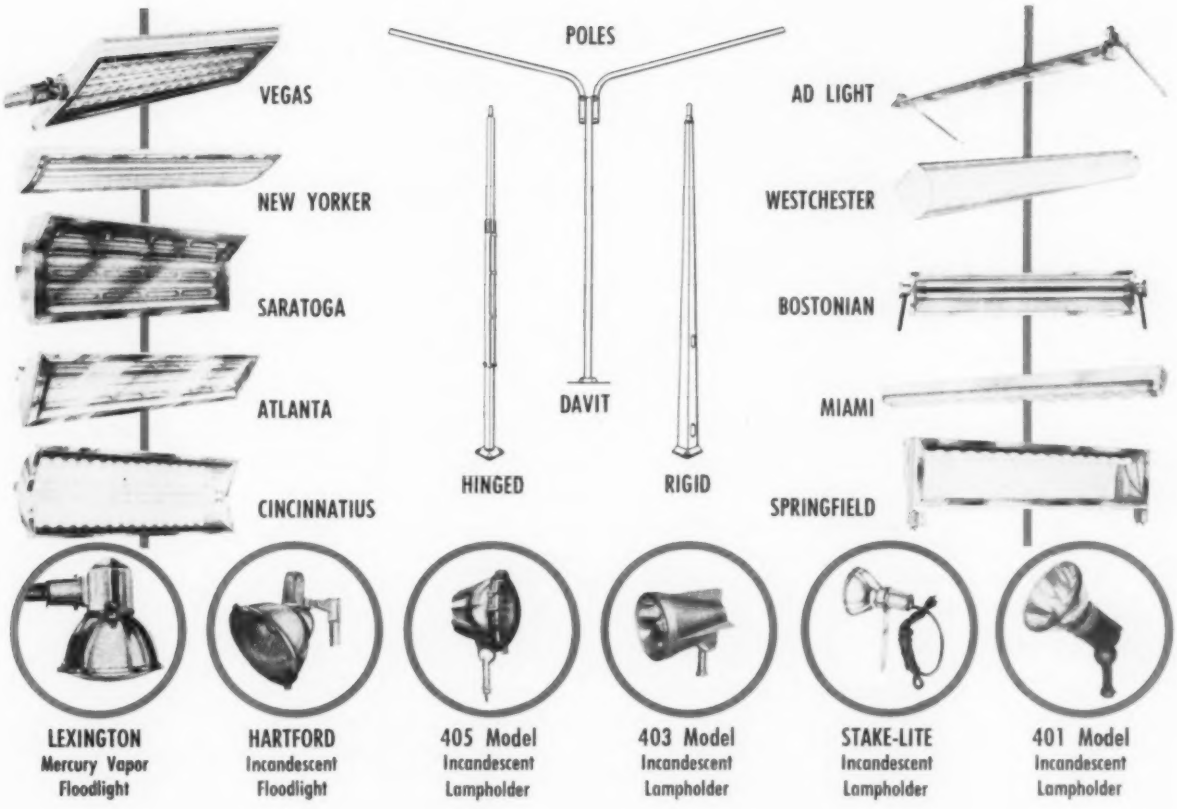


PHOTO ENGRAVING

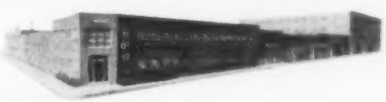
THE J. H. Spaulding COMPANY



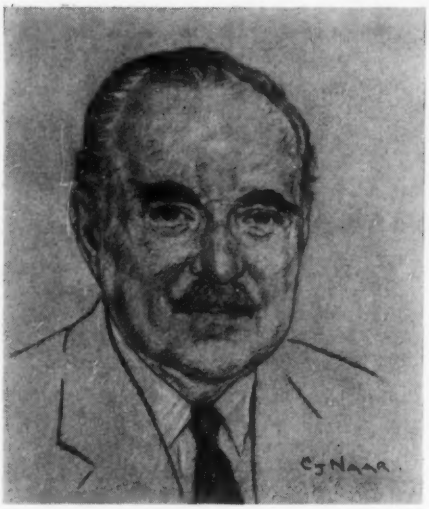
The J. H. Spaulding Company proudly offers a distinctive and comprehensive new line of outdoor lighting fixtures, poles and equipment to the electrical wholesaling trade. Through modern manufacturing facilities, engineering and advertising, the J. H. Spaulding Company can offer to the electrical wholesaler attractive profits and unequaled service.

SEE YOU AT THE NAED CONVENTION

DESIGNERS OF AMERICA'S MOST DISTINCTIVE OUTDOOR LIGHTING TEAM UP WITH AMERICA'S FOREMOST ELECTRICAL DISTRIBUTORS.



THE J. H. Spaulding COMPANY • 3731 DIRR STREET • CINCINNATI 23, OHIO
Phone Klrby 1-3486



THERE'S A NEW FRONTIER FOR *ELECTRICAL DISTRIBUTORS*

...and it's right in Your backyard!

N. J. MacDONALD, *President, The Thomas & Betts Co., Incorporated*

The new frontier is Industrial Electronics. Many of your old line suppliers are already there. Take a few minutes to review their development of new OEM products.

Nobody should be better equipped than you to represent the electrical/electronic manufacturer in the OEM field. It's merely an extension of the marketing services of a *full-functioning distributor*. You are already calling on industrials with maintenance and repair items. With this same call, your representative *could* be bringing home a profitable slice of OEM parts business as well.

WE ARE DEVELOPING INDUSTRIAL ELECTRONICS PRODUCTS

T&B is convinced, as it has been for 40 years, that the distributor is the most efficient, economical outlet for its products. To demonstrate our confidence in the OEM market we have supplemented our sales force with OEM specialists and engineers to work with your salesmen on industrial calls. Our new electronic products are advertised nationally to design engineers and promoted at OEM trade shows. We have technical and sales literature on these products for your use. We can train your men in the products. Most important, *we offer the same T&B Plan* that has backed up your sales of familiar T&B shelf goods for years.

Let us help you extend your industrial business and gain new profits with the T&B line of standard and custom OEM products.

PRESIDENT

T&B ENGINEERED **THOMAS & BETTS**

THE THOMAS & BETTS CO., Incorporated, Elizabeth 1, N. J.—IN CANADA: Thomas & Betts Ltd., Montreal

Heavy-duty junction boxes have to be more than mere splice points. That's why the Crouse-Hinds WJBF floor-Condulet is built to resist wash-down water, atmospheric moisture, dust and alkaline atmospheres – conditions that will reduce an ordinary junction to fireworks long before the Fourth of July. Hot-dip galvanized, cast Feraloy construction does the job.

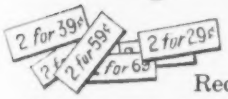
And you can get the same neoprene-gasketed moisture protection in the surface-mounted raintight Crouse-Hinds WJB Condulet. Both types are available in cast aluminum, sold at the same price as Feraloy.

28 sizes of each type are available, ranging from 4"x4"x4" to 24"x24"x12", with or without mounting feet. The number and size of conduit entrances can be specified or Condulets can be drilled and tapped in the field. *For more information check your Crouse-Hinds Distributor.*

CROUSE HINDS SYRACUSE NEW YORK

OFFICES: Atlanta Baton Rouge Birmingham Boston Buffalo Charlotte Chicago Cincinnati Cleveland Corpus Christi Dallas Denver Detroit Houston Indianapolis Kansas City Los Angeles Milwaukee New Orleans New York Omaha Philadelphia Pittsburgh Portland, Ore. St. Louis St. Paul Salt Lake City San Francisco Seattle Tulsa Washington
RESIDENT REPRESENTATIVES: Albany Baltimore Reading, Pa. Richmond, Va.
Crouse-Hinds of Canada, Ltd., Toronto, Ont. Crouse-Hinds-Domex, S. A. de C. V. Mexico City, D. F. Peterco, Sao Paulo, Brazil

my wife taught me a lesson . . .



Recently, I decided to show the little woman how to do some smart buying. I combed the paper for "specials," made notes on store addresses, and set out full of confidence.

However, at her insistence we stayed in one store the whole time. Never did go after my specials . . . and I'll have to admit the place we shopped had about everything desired by civilized man.

Later, back at the office, I realized the wasted gasoline, rubber, energy and shoe leather just wouldn't have been worth the saving. The lesson was clear. You and I, as electrical wholesalers, can save time and money by consolidating purchases wherever possible. For every extra purchase order that isn't written, there are also receiving reports, checks, inventory sheets, that don't have to be written. There are fewer shipments coming in. Fewer cartons to open and then there's always the savings in freight.

One way to cash in on these efficiencies is to buy electrical supply items from Porcelain Products Co. They make 127 different items for sale through recognized electrical wholesalers. They can furnish you a well rounded line including wireholders, mast kits, house brackets, Copperweld ground rods, racks, spools, clevises, wedge grips, split bolts and many, many others. Porcelain Products Co. has been serving the industry since 1894. Let their full line help lead you to more profit.

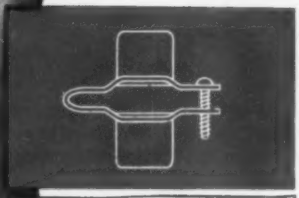
For more information just write for the name of your local representative.

PORCELAIN PRODUCTS CO. 225 N. PATTERSON ST., CAREY, OHIO

ANOTHER CAROL FIRST!

RANGE and DRYER CORDS

Featuring "Flush-Fit" Molded-on Plug



NEW COMPACT DESIGN! Special Carol molded-on plug only one-half the size and weight of ordinary types . . . fits flush against receptacle.

NEW FLAT CORD! Parallel conductors . . . more flexible, easier to install than ordinary cords. Attractive, modern gray color.

NEW ADJUSTABLE STRAIN RELIEF! Fastens cable securely to outlet box. 2-way locking design.

NEW EXCLUSIVE PACKAGING! "See-Thru" vinyl bags replace ordinary sleeve-packaging . . . cleaner, easier to stock . . . make eye-catching merchandising display.

Cords also available in sturdy, reshipper cartons. All specifications—part number, gauges, ratings, length—on both types of package. Gauges also stamped on terminals for clear identification after unpacking.

Available in full range of sizes and ratings. Order now...and *SEE* the difference in sales!

When you call for cable, call for.....

Carol®

CAROL CABLE COMPANY

Division of [illegible] Company, Inc., Pawtucket, Rhode Island

LINE MATERIAL LIGHTING SPECIALIST Ray Saccany, left, discusses a proposed lighting layout with Lewis Sternberg, Lighting Engineer for Midland Electric Co., Cleveland, Ohio. Line Material Field Engineers and Lighting Specialists are graduate engineers. These teams of lighting experts support Authorized L-M Distributors throughout the entire country with experienced lighting application engineering service.

"L-M's Performance and Strict Adherence To Its Distributor Policy Is Impressive"

Says Lewis Sternberg, Midland Electric Co., Cleveland, Ohio

"L-M's complete line, its stature in the outdoor lighting industry, and its written distributor policy caused us to become an Authorized L-M Distributor in August, 1960," says Mr. Sternberg. "Recently Ray Saccany turned over to us an order he had received direct for about $5,000 worth of PTL units. Other orders received direct by L-M have also been turned over to us.

"Our six-months relationship with L-M has already proved rewarding. On many occasions we have received prompt solutions from their qualified engineers when we asked for engineering service and help on lighting problems. With L-M's lighting equipment we are able to furnish complete outdoor lighting installations.

"Needless to say, we have complete confidence in L-M, and are confident that our association with L-M will result in additional thousands of dollars of profit for Midland Electric Company."

L-M's STYLED QUALITY OUTDOOR

Lawn-Glo

Lawn-Glo lights are aluminum construction throughout. Available in several distinct styles in a choice of six decorator colors and natural brushed aluminum. For standard household lamps up to 150 watts. Sold exclusively through Authorized L-M Distributors.

PTL's

L-M **P**ost **T**op **L**ights combine beauty of design and efficiency. Scientific glass refractor is available in seven IES light patterns. Mercury or incandescent. Available in six decorator colors and natural aluminum. Sold through Authorized L-M Distributors only.

Mercury Ovalites

Mercury Ovalites in modern functional beauty are ideal for parking lots, streets and highways. Accommodates clear or color-improved mercury lamps through 400 watts. The ballast is an integral part of this luminaire to provide efficient, economical installations.

Fluorescent

Fluorescent luminaires are available in a wide variety of lengths and styles to accommodate all lighting applications. L-M's exclusive Peltier spot-cooling of lamps is available to keep light output at a maximum, regardless of changes in ambient temperatures.

CADILLAC ELECTRIC SUPPLY CO.

431 EAST LARNED STREET, DETROIT 26, MICHIGAN · PHONE WOODWARD 1-2262

Harry C. Simonton
of Cadillac Electric Supply

Praises L-M's Fair Policies, Complete Protection

One of Detroit's larger, more able electrical wholesalers, Cadillac Electric Supply, recently became an Authorized L-M Distributor. Following its own well-defined distributor policy, L-M turns over to Cadillac all orders in that territory for PTL and Lawn-Glo units, including a substantial order from Detroit Edison Company, otherwise a direct L-M customer.

Cadillac's Harry C. Simonton was most impressed, and wrote an enthusiastic letter, which reads in part:

"Never have we been affiliated with a manufacturer who has given us such splendid cooperation and service, on both the factory and regional level. No distributor could ask for a line backed up by fairer policies or more complete protection.

"L-M's local representative has been most generous with his time in addressing our sales meetings to educate our personnel, and in making calls with our salesmen.

"He has also been responsible for our receiving in excess of $20,000 worth of business at a handsome profit . . . No manufacturer - distributor association could be more ideal."

A. M. LITTLE

TELEPHONE GR 8-2177

B. F. LITTLE

MEMBER NAED

A. M. LITTLE & SON

ELECTRICAL SUPPLIES
LIGHT AND POWER EQUIPMENT
LINE CONSTRUCTION MATERIAL
SINCE 1868

429 EAST JEFFERSON ST.
SYRACUSE 2, N. Y.

Bradley F. Little
of A. M. Little & Sons

"Our association with L-M is already proving to be most profitable."

President B. F. Little comments, in part: "Line Material's complete line of quality outdoor lighting products enables us to participate in the residential, commercial, and industrial markets. Their local representative, Bill Helden, has been most cooperative in helping us develop outdoor lighting business. Our association with Line Material is already proving to be most profitable."

SEE US IN BOOTH NO. 38
N. A. E. D., DETROIT

LIGHTING LINE

Styled Mercury

Styled Mercury luminaires represent elegance, beauty, and efficient, high-level lighting. Aluminum construction; choice of five pastel colors or lustrous aluminum, for lighting that compliments as it lights. Here is the newest product of L-M's leadership in outdoor lighting.

Line Material, a leader in outdoor lighting for half a century, provides a complete line of exclusively designed lighting units. To reach the large and growing commercial, industrial, and residential markets, L-M has adopted a new written distributor policy, that wholesalers agree is extremely fair to the wholesaler, and fair to L-M.

In less than a year, many reputable electrical wholesalers have become Authorized L-M Distributors, and are already reaping the benefits of their association with Line Material. These are just a few typical examples of how Authorized L-M Distributors feel about their relationship with Line Material.

Authorized L-M Distributors operate under a mutually signed agreement. The complete details of L-M's relationship with its Authorized Distributors is clearly defined in a printed policy.

LINE MATERIAL® Industries

OUR 50TH YEAR · LM · 1911 — 1961

McGRAW-EDISON COMPANY

Outdoor Lighting

McGRAW EDISON

510 DISTRIBUTION TRANSFORMERS · RECLOSERS, SECTIONALIZERS AND OIL SWITCHES
FUSE CUTOUTS AND FUSE LINKS · LIGHTNING ARRESTERS · POWER SWITCHING EQUIPMENT
PACKAGED SUBSTATIONS · CAPACITORS · REGULATORS · OUTDOOR LIGHTING
LINE CONSTRUCTION MATERIALS · PORCELAIN INSULATORS · FIBRE PIPE AND CONDUIT

new SOLA indoor mercury-lamp transformer

provides parallel protection

. . . plus constant-wattage stability!

Here's the big improvement you've waited for in *mercury lamp ballasting:* a really stable, *parallel-type,* constant-wattage, *2-lamp* transformer. Even if one lamp burns out, this new SOLA transformer keeps the other shining steadily.

And SOLA's *constant-wattage performance* protects both lamps and wiring against surge current . . . forestalls flicker by providing complete electrical independence between paired lamps; also, automatically compensates for line-power fluctuations. And the modest starting demand of SOLA constant wattage allows you to install more fixtures per circuit without having to step up wire sizes. The cost advantages are obvious in lighting warehouses, docks, sheds, and similar types of installations.

Contact your SOLA representative for details on new 2-lamp indoor constant-wattage MV transformers, as well as the other indoor and outdoor alternative units. Or write for information, mentioning *parallel MV indoor transformer.*

- "Paralleling" ends double lamp-outages
- Exclusive constant-wattage design holds lumen output within $\pm 1\%$ for line-voltage changes as great as $\pm 13\%$, assuring full-rated lamp life
- Prevents "drop-out" since input voltage must fall 30% below nominal before lamps extinguish
- Inherent protection against open or short-circuited lamps
- UL listed
- Available for 115, 208, 230, 277, 460 and 575-volt input

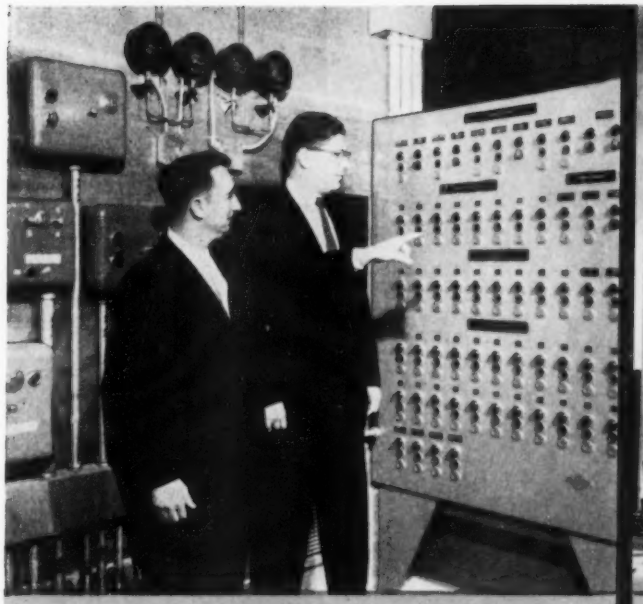
SOLA

A DIVISION OF BASIC PRODUCTS CORPORATION

BPC

SOLA ELECTRIC CO.
Busse Road at Lunt,
Elk Grove Village, Ill.
HEmpstead 9-2800

IN CANADA, Sola-Basic Products Ltd., 377 Evans Ave., Toronto 18, Ont.



Centralized control for all of the 59 heating and cooling units throughout the building is provided by this Arrow-Hart Master Push Button Panel. Consulting engineers Arthur Bigelson and S. M. Shefferman look it over.

BENDER BUILDING, Washington, D. C. Builder: Blake Construction Co.
Consulting Engineers: Shefferman and Bigelson.
Mechanical Contractor: Frank Blanch, Sr.
Electrical Contractor: Walter Truland Co., Inc.

SERVICE and QUALITY determine selection of ARROW-HART Motor Controls for Bender Building

ARROW-HART MOTOR CONTROLS used in the ultra-modern Bender Building, largest new office building in Washington, D. C. include across-the-line, reduced voltage starters, and push button controls for the heating, ventilating and air-conditioning motors. Centralized master panels operate all magnetic starters and controls for restaurant equipment and other special facilities.

ARROW-HART FIELD ENGINEERING SERVICE played an important part in assuring prompt, trouble-free installation of hundreds of individual motor control units by the electrical contractor. Working in close cooperation with the mechanical contractor, the temperature control supplier and the consulting engineers, Arrow-Hart's Field Representative coordinated all ordering information. The centralized control panels were pre-engineered for specific installation requirements.

Write for more information on Arrow-Hart Motor Controls and Service to The Arrow-Hart & Hegeman Electric Company, Dept. EW, 103 Hawthorn St., Hartford 6, Connecticut.

All restaurant electrical equipment, including fans, compressors, pumps, etc., is controlled by this master push button panel custom-engineered by Arrow-Hart.

CONSULTING ENGINEER:
S. M. Shefferman of Shefferman and Bigelson . . . "Arrow-Hart met the rigid specifications that we demanded in the construction of this building."

MECHANICAL CONTRACTOR:
Frank Blanch, Sr. . . . "Arrow-Hart's Master Push Button Control Panel that provides centralized control should certainly save money in the operation of the 59 heating and air conditioning units."

BUILDING SUPERINTENDENT:
Robert McDaniel . . . "Arrow-Hart supplies good, durable equipment that does the job expected of it."

ARROW AH HART
Quality since 1890

SEE US AT BOOTH 403
N. A. E. D. CONVENTION

MOTOR CONTROLS • ENCLOSED SWITCHES • APPLIANCE SWITCHES • WIRING DEVICES

listen to your potential customers...

"I saw an ad on that new Wing-Nut; so I clipped it and sent away for information and a sample. But if the distributor calls on me, I will order some to try out immediately."

— Chief Electrician.

"This new Wing-Nut is something we can use all the time on our jobs. In my estimation it really is better, more functional, and far superior to other products."

— Foreman, Electrical Contractor.

"I have shown a sample Wing-Nut to the fellows I work with, and I know if we all get yelling for Wing-Nuts, we'll soon have them on every branch circuit job."

— Electrician.

"After I read the ad on the new Wing-Nut, I ordered some. We are now using them regularly. I find them to be really superior. This connector eliminates sore thumbs. The wings are a great new idea, and save my fingers."

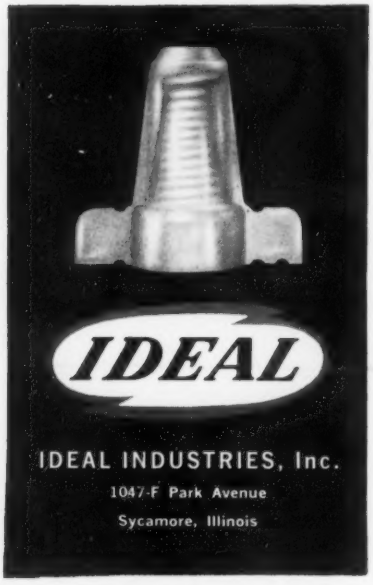
— Supervisor, Electrical Contractor.

"We sent away for samples and tried Wing-Nut right away. It has a better grip and doesn't require any tools because of its built-in wrench."

— Chief Mechanical Engineer of Department Store Chain.

"It's about time! This is exactly the branch circuit connector I've been waiting for!"

— Journeyman Electrician.



These are the actual thoughts expressed by a sampling of your customers in a recent survey. They've been pre-sold by heavy advertising of Wing-Nut. They've been given free samples by Ideal.

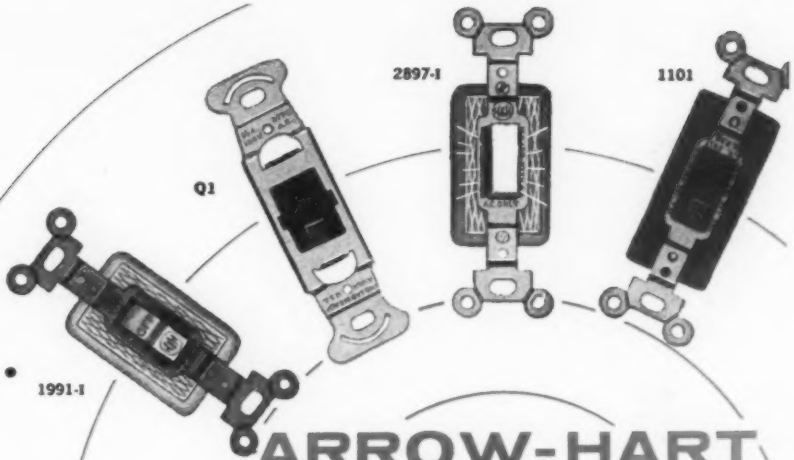
Now's the time for you to move in and pick up those original orders... and the repeat orders that will follow.

Remember these selling facts about WING-NUT

THE NEW SCREW-ON CONNECTOR FOR BRANCH CIRCUIT WIRING:

- Wing grip makes it 50% easier to apply.
- U.L. approved for Aluminum-to-aluminum wire splices.
- U.L. approved for 474 solid and stranded copper wire combinations.
- You SEE the splice is right, through the nylon shell.
- Nylon shell is tough, with high dielectric and 105° C rating.
- Shell has deep, wide skirt to handle even bulky RHW wires.
- Splices heaviest branch circuits . . . even two No. 6 with one No. 12.

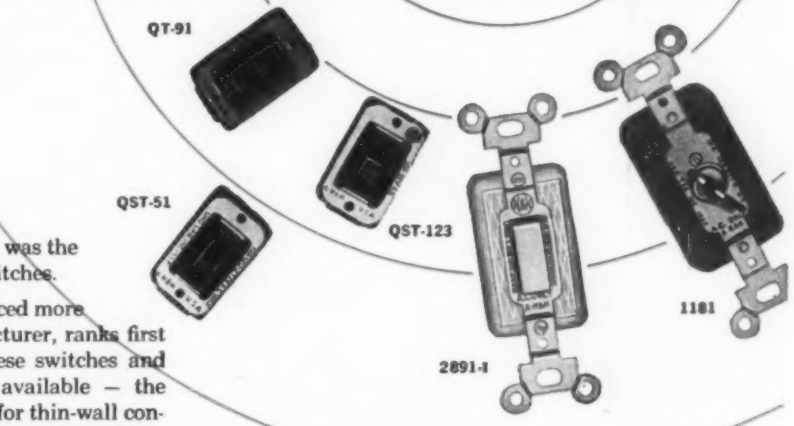
a family of Quality...



ARROW-HART

AH

Quiette A.C. Switches



Only Yesterday . . . Arrow-Hart pioneered in creating the first switch featuring quiet, mechanical action, and was the first to offer a complete line of quiet switches.

Today . . . Arrow-Hart, having introduced more quiet switches than any other manufacturer, ranks first in the design and development of these switches and now offers the most modern switch available – the Space-Saver Quiette Switch. Designed for thin-wall construction, the Space-Saver Quiette Switch is a further addition to Arrow-Hart's full line of Quiette A.C. Switches – the most complete line available!

Whatever your specifications, there's a member of the Arrow-Hart Quiette Switch family engineered for the application.

Write for your copy of the new folder, "The Complete Quiette Switch Line," Form No. 327-G1371 to The Arrow-Hart & Hegeman Electric Company, Dept. EW, 103 Hawthorn Street, Hartford 6, Conn.

H&H *SWITCHES SHOWN INCLUDE H&H SPECIFICATION GRADE.*

Listed as standard by Underwriters' Laboratories. UL

SEE US AT THE
N. A. E. D.
CONVENTION
BOOTH 403

ARROW AH HART
Quality since 1890

WIRING DEVICES • MOTOR CONTROLS • ENCLOSED SWITCHES • APPLIANCE SWITCHES

WHEN YOU THINK OF WIRING DEVICES, THINK OF ARROW-HART

NOW... A fan designed for

SQUARE

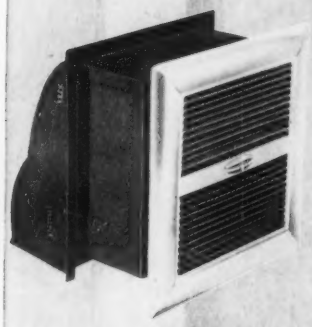
framing

NEW EMERSON-PRYNE SQUARE Fans

cut installation costs 30%

CEILING
MODEL 252

SQUARE for easy installation . . . greater efficiency. True air-foil styrene blade driven by a super-powered motor provides maximum CFM with minimum noise. Will connect directly to standard 8" duct. Beautifully designed, square chrome plated, louvered grille included.



WALL
MODEL 253

SQUARE for easy installation . . . greater efficiency. Deluxe, super-powered motor and air-foil styrene blade. Maximum air delivery and low, low noise factor. Sidewall housing with NEW patented Tenso-Matic Shutter that eliminates flutter. Square, louvered, chrome-plated grille.

NEW EMERSON-PRYNE SQUARE FANS

NEW EMERSON-PRYNE SQUARE FANS cut your installation cost, offer home buyers a better looking product that does a more efficient job. It is easier to mount a square object against a stud or joist than it is a round one . . . and it is easier to cut the hole. Integral nail prongs and adjustable mounting brackets further speed installation. More than that . . . new Emerson-Pryne Square Fans do a better job of air removal because there is a much larger opening area and a natural venturi not normally found in round fans. There is less resistance to air movement so that they move more CFM with less wattage. The chrome-plated, square, louvered grilles are constructed to conceal the mechanical parts of the fan. This provides extra safety and a handsome appearance. Stock up on Emerson-Pryne square fans today.

EMERSON ELECTRIC

BUILDER PRODUCTS GROUP

EMERSON
ST. LOUIS, MO.

PRYNE
POMONA, CAL.
KEYSER, W. VA.

IMPERIAL
LATROBE, PENN.

RITTENHOUSE
HONEOYE FALLS, N. Y.

WRITE DEPT. B85, EMERSON ELECTRIC • 8100 FLORISSANT • ST. LOUIS 36

ARROW·HART

now offers you even greater,

FLEXIBILITY

in 100 and 200 amp service equipment

AVAILABLE ONLY FROM AUTHORIZED ARROW-HART DISTRIBUTORS

* **NEW CP-215 and CPS-215 Four Circuit Fuse Blocks,** available only from ARROW-HART, may be used interchangeably with 100 amp or 200 amp ADD-ON Service Equipment . . . permitting easy installation of additional branch circuits in place of 30 amp or 60 amp pullouts. *4 circuit blocks have opposite polarity and are ideally suited for electric heat installations — saving wiring time and materials. Can not unbalance loads. Available with Type "S" 15 amp safety adapter rings.*

LOWER INVENTORIES . . . are needed, because Add-On Flexibility (available at no extra cost) makes it possible to provide the right equipment for any installation from minimum stocks of basic units and Add-On components.

FULL-LINE INTERCHANGEABILITY of Arrow-Hart ADD-ON components provides a single series of units for both 100 amp and 200 amp equipment. For example, the 200 amp service unit shown above is factory assembled with one 200 amp hinged pullout, two 60 amp pullouts, two 30 amp pullouts, and 12 fused branch circuits. Whenever needed, you can add one or two 30 or 60 amp pullouts, plus two or four branch circuits. Or, by using the new CP-215 fuse block in place of pullouts, a total of 12 fused branch circuits can be added. These same components also give the 100 amp equipment similar flexibility. No other supplier currently offers such versatility in 100-200 amp service equipment.

ARROW-HART Type "S" Fuse Holders (CPS-15 and CPS-215) are supplied with built-in adapters for maximum safety — allow insertion of only 15 amp Type "S" fuses for areas where code requirements make this protection mandatory.

COMPLETE INFORMATION on these units is presented in the new booklet, "100-200 Amp ADD-ON Service Equipment." For your free copy, write to: Dept. EW, The Arrow-Hart & Hegeman Electric Co., 103 Hawthorn Street, Hartford 6, Connecticut.

SEE US AT THE N. A. E. D. CONVENTION, BOOTH 403

ARROW AH HART

Quality since 1890

ENCLOSED SWITCHES • WIRING DEVICES
MOTOR CONTROLS • APPLIANCE SWITCHES

Malleable Iron Liquid-Tite Connectors

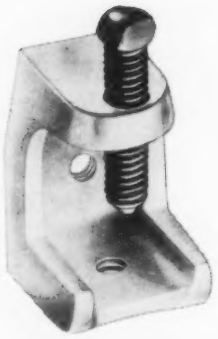
QUALITY MALLEABLE IRON FITTINGS ARE AVAILABLE!

GEDNEY'S

Complete Line is Precision-Made of Unbreakable Malleable Iron . . .

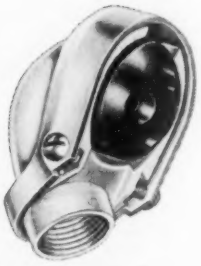
- *Unmatched for Toughness*
- *Impervious to Corrosion*

GEDNEY FITTINGS FIT

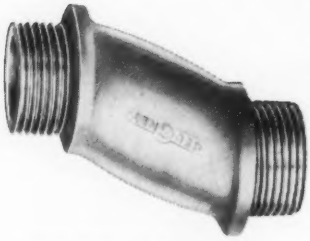


M.I. Beam Clamps

M.I. 90° Corner Adapters and Corner Elbows

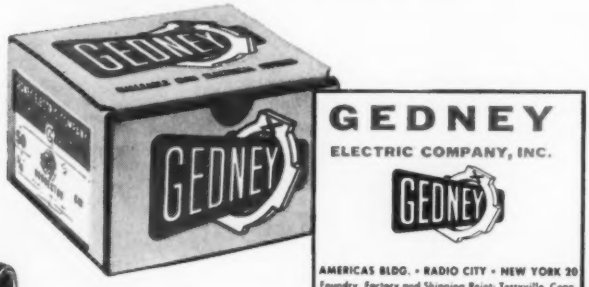


M.I. Entrance Caps



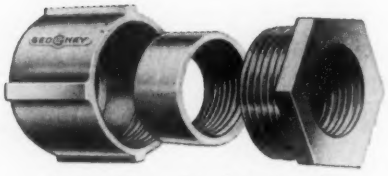
M.I. Offset Connectors and Offset Nipples

M.I. Insulated Bushings



M.I. Conduit Bodies

M.I. Armored Cable & Non Metallic Connectors



M.I. 3 Piece Conduit Couplings

Get YOUR Share of Big EXTRA PROFITS

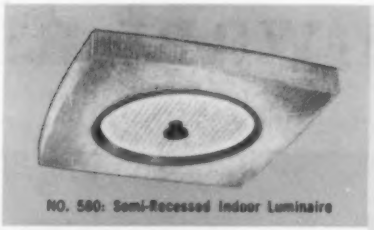
From these NEW

HOLOPHANE

*Prismatically-Controlled

LUMINAIRES

For Indoor and Outdoor Residential Lighting



NO. 580: Semi-Recessed Indoor Luminaire

NO. 434: Bracket Luminaire for entrances and garage doors.

NO. 433: Bracket Luminaire for building—sides and gates.

NO. 429: Postop® for walks, driveways, steps, all outdoor areas.

• *Distributed Nationally* • *Demanded Consistently*

HOMEOWNERS . . . Want these new luminaires because they provide the finest residential lighting . . .

BUILDERS . . . Know that these units will help sell more houses, faster, at better prices . . .

DISTRIBUTORS . . .

Benefit by extra volume, profits and prestige in selling these luminaires . . .

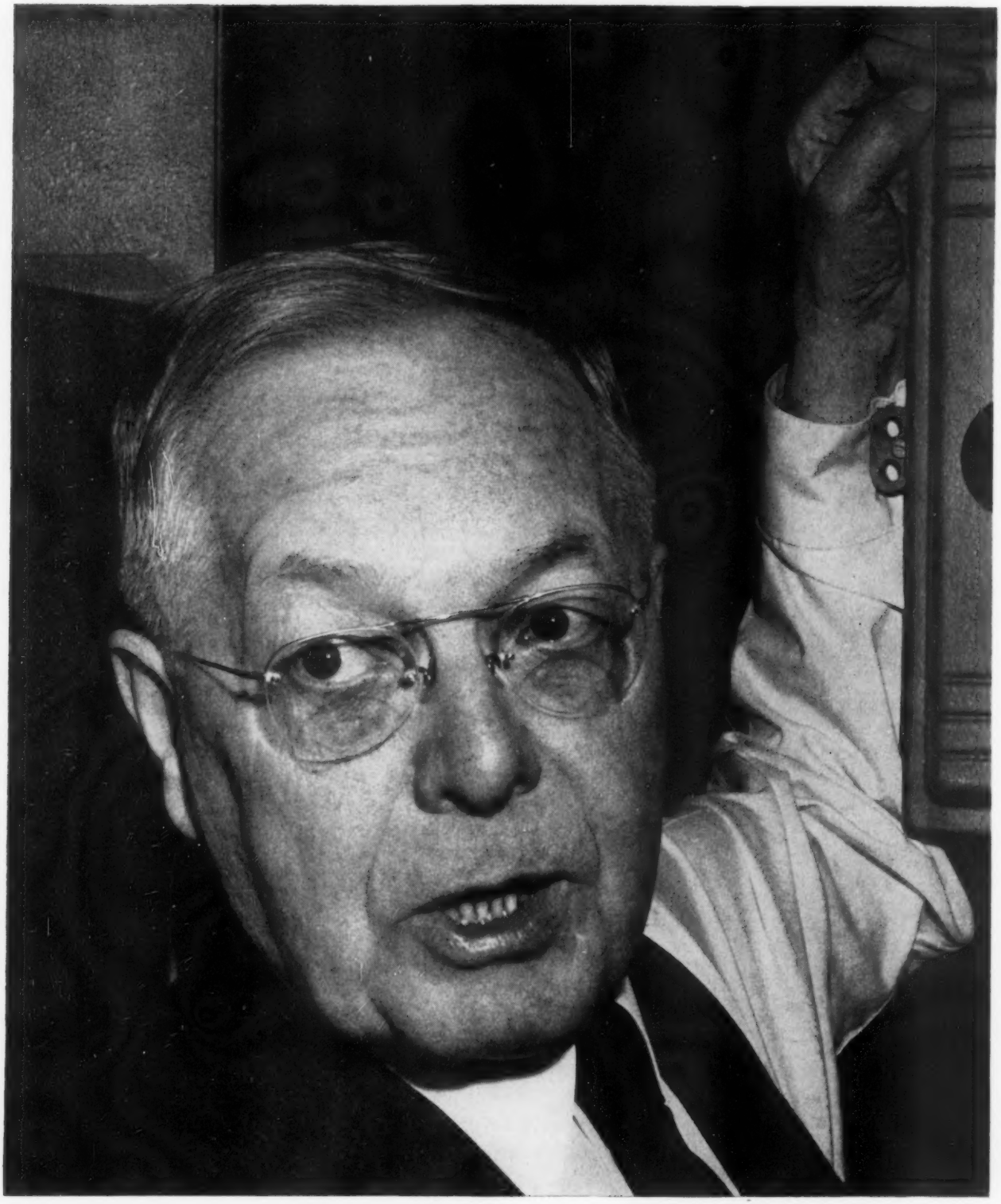
Get the facts from Holophane at the NAED Convention

HOLOPHANE COMPANY, INC.

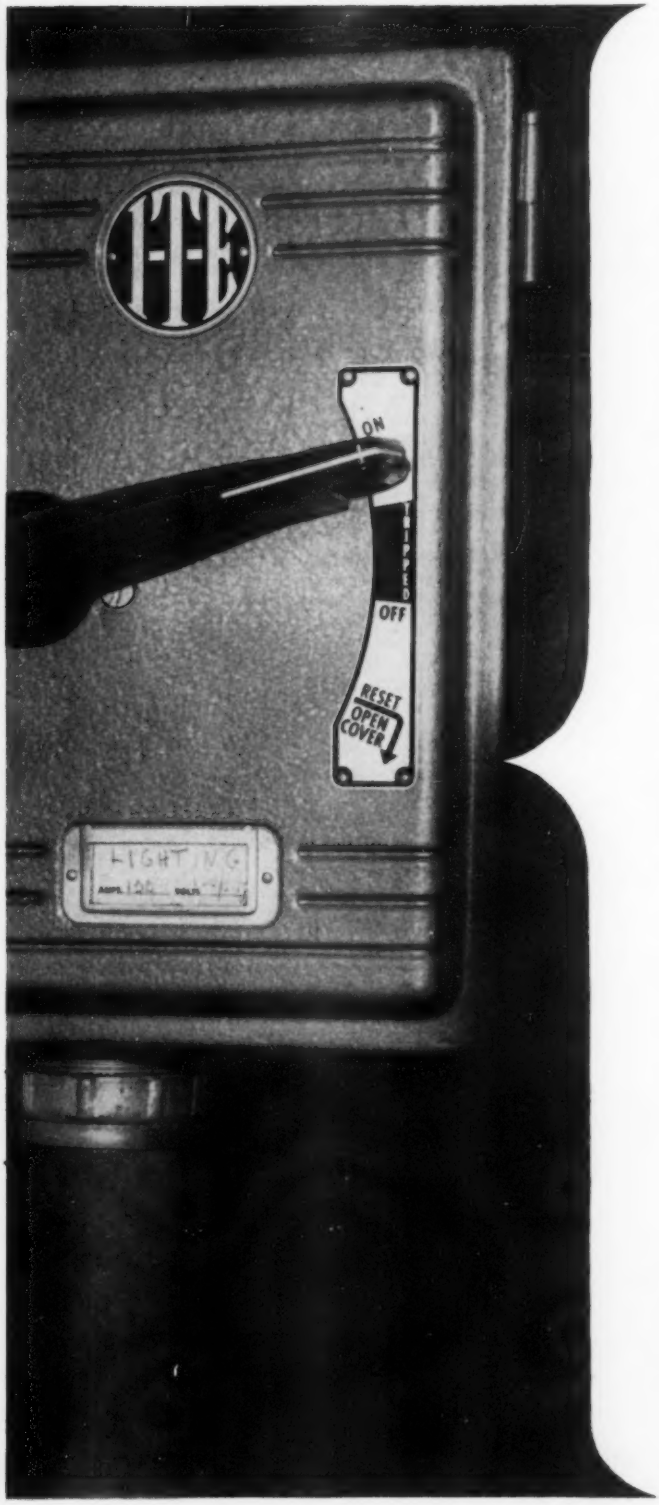
Lighting Authorities Since 1898 • **342 Madison Ave., New York 17, N. Y.**

THE HOLOPHANE CO., LTD., 418 KIPLING AVE. SO., TORONTO 18, ONTARIO

"We want a distributor



who's up with the times"



"When we order circuit breakers here at our plant, we expect delivery immediately. And today any distributor who doesn't have them in stock is turning his back on business.

"Maybe 20 years ago there was some excuse for not stocking circuit breakers, but not now. Especially for industrial electricity, this is the circuit breaker age. If we have an interruption, we want to be able to get power back fast. We can't afford lost time and idle equipment. We don't want electrical hazards. And we want to be sure we have exactly the protection that we need. Only circuit breakers combine safety with convenience.

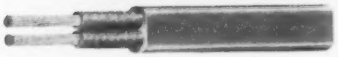
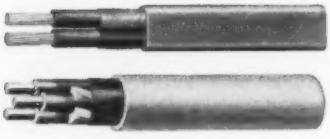
"Ask around today, and you'll find that the men who really know the facts about electrical circuit protection are circuit breaker men. And just like me, they want their distributors to be at least as up to date as they are.

"We expect to pay a little more for circuit breakers, because we know they'll save us so much in the end. Besides, for the larger sizes we pay less. Which brand? Well, switchboard builders prefer I-T-E. So do we."

Send for new free bulletins on the advantages of circuit breakers for industrial plants. See how much you can boost your dollar volume. I-T-E Circuit Breaker Company, Dept. SA, 1900 Hamilton St., Philadelphia 30, Pa.

I-T-E CIRCUIT BREAKER COMPANY

Index of Phelps Dodge

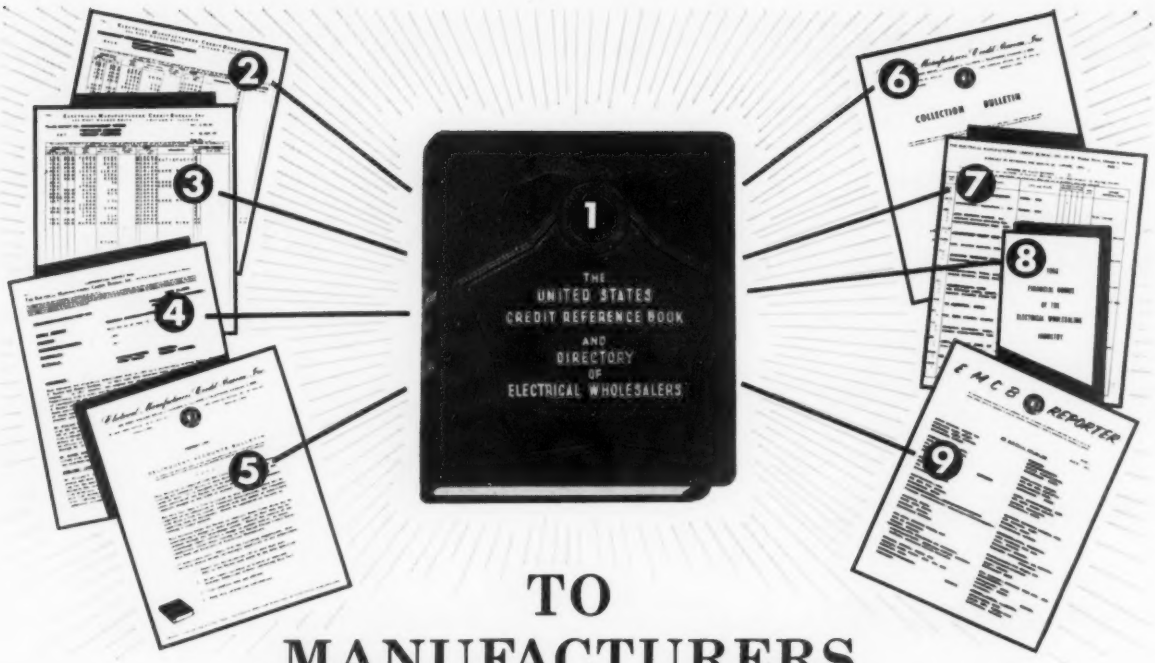
Wires and Cables	Type Letter	Trade Name or Designation	Maximum Operating Temperature	USE
	ACV	Armo-Lok	85 C (185 F)	Dry Locations
	None	Armo-Lok	85 C (185 F) High Voltage	General Purpose: Consult manufacturer for specific applications
	W	Portable Power Cable	75 C (167 F)	Mining Machines, Dredges, Shovels, and similar portable applications Pennsylvania Dept. of Mines Flame Resistance Approval P-114. U. S. Bureau of Mines Listing P-114-BM.
	G		Low Voltage	
	SHD		85 C (185 F) High Voltage	
	RHW	Flamestop Heat and Moisture Resistant	75 C (167 F)	Dry and Wet Locations
	RHH	Flamestop Heat-Resistant	90 C (194 F)	Dry Locations
	RHL	Heat Resistant Rubber Lead	75 C (167 F)	Wet Locations and other Special Conditions
	NM	PD-X Nonmetallic-Sheathed Cable	60 C (140 F)	For Wiring Houses, Rural Buildings, Small Stores, and Shops.
	UF	Perma-Dure Nonmetallic-Sheathed Cable	60 C (140 F)	UF: Underground Feeder and Branch Circuit Cable for Direct Burial. NMC: For Interior Wiring in Moist or Corrosive Locations.
	UF-NMC			
	THW	Habirdure Thermoplastic insulated	75 C (167 F)	Dry and Wet Locations
	TW		60 C (140 F)	Dry and Wet Locations
	TF		60 C (140 F)	Fixture Wire
	None	Petro-Dure Thermoplastic Insulated Nylon Jacketed	60 C (140 F)	Moist locations and where exposed to mineral oil, liquid gasoline and gasoline vapor.
	None	Habirdure Machine Tool, Control, and Switchboard Wire	90C (194F) in air 80C (176F) in oil	Machine Tool, Control and Switchboard Wiring

PHELPS DODGE COPPER PRODUCTS CORPORATION

Wires and Cables

Wires and Cables	Type Letter	Trade Name or Designation	Maximum Operating Temperature	USE
	TW	Habirdure (9T)	60 C as TW 90 C as Appliance Wiring	NEC Type TW Bldg. Wire—60°C Appliance Wiring—90°C in air or 60°C in water or oil
	None	Habirdure Appliance Wire	105 C (221 F) IN AIR 80 C (176 F) IN OIL	Appliance Wiring
	SE	Service Entrance Type SE — Style U Unarmored	75 C (167 F)	Service Entrance or Combination Service Drop & Service Entrance
	SD	Service Drop Type SD	60 C (140 F)	Service Drop
	USE	Service Entrance Type USE	75 C (167 F)	Underground Service Entrance, Direct Burial.
	V	Varnished Cloth Braided	85 C (185 F)	Dry locations only. Smaller than No. 6 by special permission.
	VL	Varnished Cloth Lead	85 C (185 F)	Wet or Dry locations. Smaller than No. 6 by special permission.
	None	Habirduct Habirprene	75 C (167 F) Low Voltage	General Purpose for Direct Burial, Aerial, Conduit and Underground Duct Installations.
		Habirite Habirprene	85 C (185 F) High Voltage	
	S or SO	Hard Service Cord	60 C (140 F)	Pendant or portable extra hard usage in damp locations; SO for oil resistance
	SJ or SJO	Junior Hard Service Cord	60 C (140 F)	Pendant or portable hard usage in damp locations; SJO for oil resistance
	SP	All Rubber Parallel Cord	60 C (140 F)	For use in pendant or portable applications in damp locations not subject to hard usage

BUILDING WIRES AND CABLES



TO MANUFACTURERS

SELLING THE ELECTRICAL WHOLESALE TRADE

Build more secure business relationships with your Electrical Wholesale customers by having accurate credit information at your fingertips at all times. Know which Wholesalers are growing stronger . . . and those which are not.

EMCB provides its subscribers with the following nine point credit information program . . . at a basic cost of less than $1.00 a day.

1 THE UNITED STATES CREDIT REFERENCE BOOK AND DIRECTORY OF ELECTRICAL WHOLESALERS giving you the following information on approximately *1000 Electrical Wholesalers* in the United States and Canada . . .

- legal composition
- capital rating
- principal lines carried
- length established
- history of payments—with average of highest credits

. . . with monthly revisions, additions and summaries pointing out significant changes in payment records and financial status.

AN ADDED VALUE! This directory has proved profitable for new business prospecting.

2 LEDGER INTERCHANGE REPORTS consisting of complete payment history.

3 RECIPROCAL COPIES OF LEDGER INTERCHANGE REPORTS—a complete report of buying habits supplied whenever you contribute your credit experience through EMCB weekly checklist.

4 SPECIAL NARRATIVE REPORTS consisting of detailed financial analysis (based on financial statements obtained annually by EMCB with cooperation of Electrical Wholesalers), historical background and credit recommendations.

5 DELINQUENT ACCOUNTS BULLETIN—published monthly.

6 ACCOUNTS PLACED FOR COLLECTION BULLETIN—published monthly. Also supplemental bulletins published bi-weekly.

7 CHANGES IN CREDIT RATINGS BULLETIN—published monthly.

8 ANNUAL STATISTICAL REPORT ON THE FINANCIAL AND OPERATING NORMS OF THE ELECTRICAL WHOLESALING INDUSTRY.

9 NEWLY ESTABLISHED ELECTRICAL WHOLESALERS BULLETIN—published periodically.

What a few subscribers say about EMCB services:

"I would like to take this opportunity to advise you that we have been very, very pleased with EMCB's Services."
—Manufacturer of Electrical Wiring Devices*

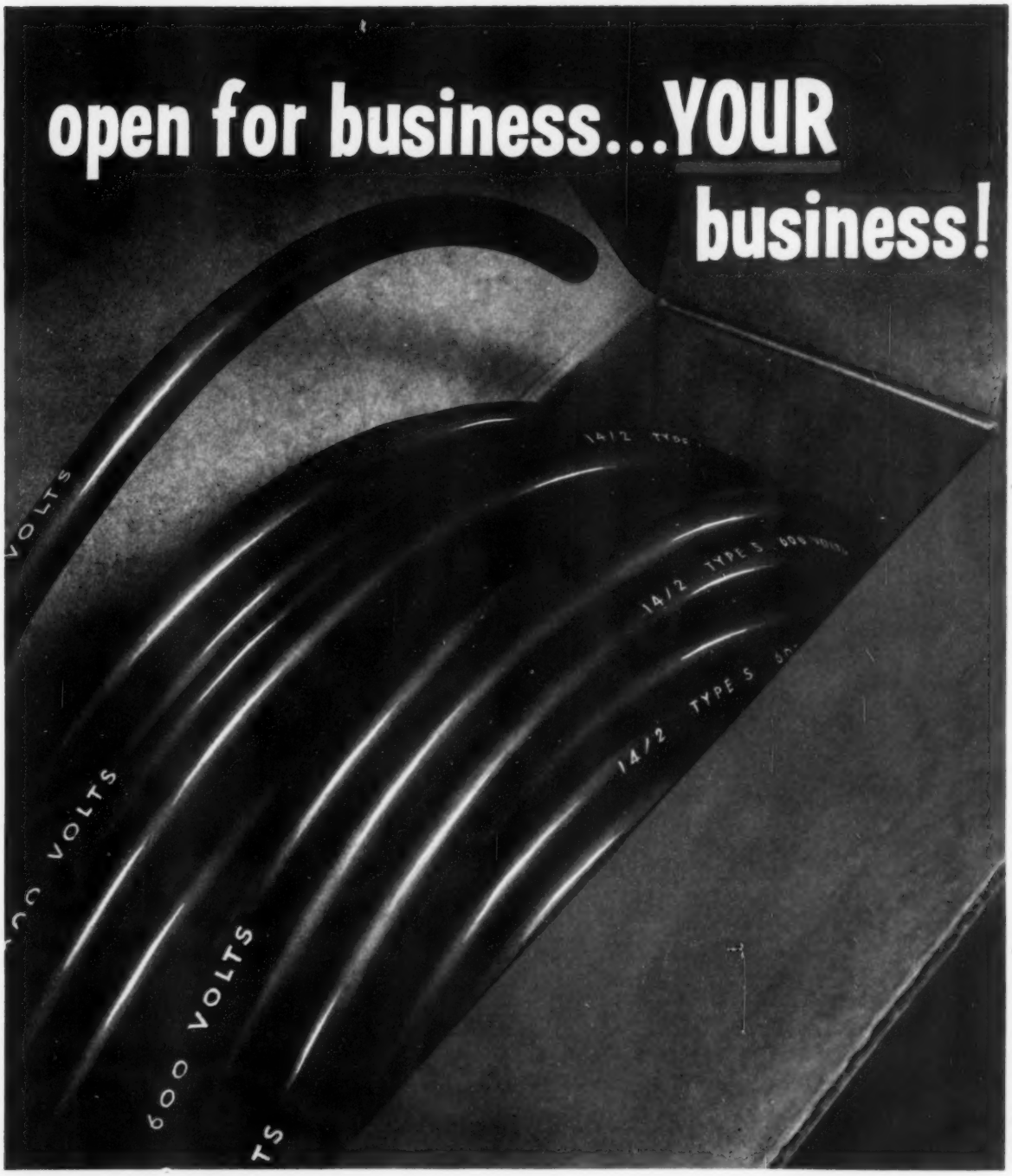
"We might tell you that we have found the "Reporter" very helpful in establishing new outlets. We have picked up some nice accounts through these leads."
—Manufacturer of Safety Switches, etc.*

*Name furnished on request.

Write or phone for more information today. There is no obligation.

This service is confidential and available ONLY to manufacturers selling the Electrical Wholesale trade.

Electrical Manufacturers Credit Bureau, Inc.
LOS ANGELES • CHICAGO • NEW YORK
205 WEST WACKER DRIVE • CHICAGO 6, ILLINOIS • ANdover 3-3080



ROYAL Portable Cords

have the quality, the reputation, and the packaging to open up more sales and profits for you! There's a complete range of cord types and sizes, serviced by Royal's nationwide sales organization. Rubber, neoprene, thermoplastic portable cords. Fixture wires. Lamp cords. Machine tool wires. Thermo cables. Bell wires. Coaxial cables. And more. Stock up now on the *fastest-selling cord line* . . . the line that's preferred by users . . . the line that means business — for *you* . . . Royal! See your Royal representative.

ROYAL ELECTRIC ...an associate of

ROYAL ELECTRIC CORPORATION
PAWTUCKET, RHODE ISLAND

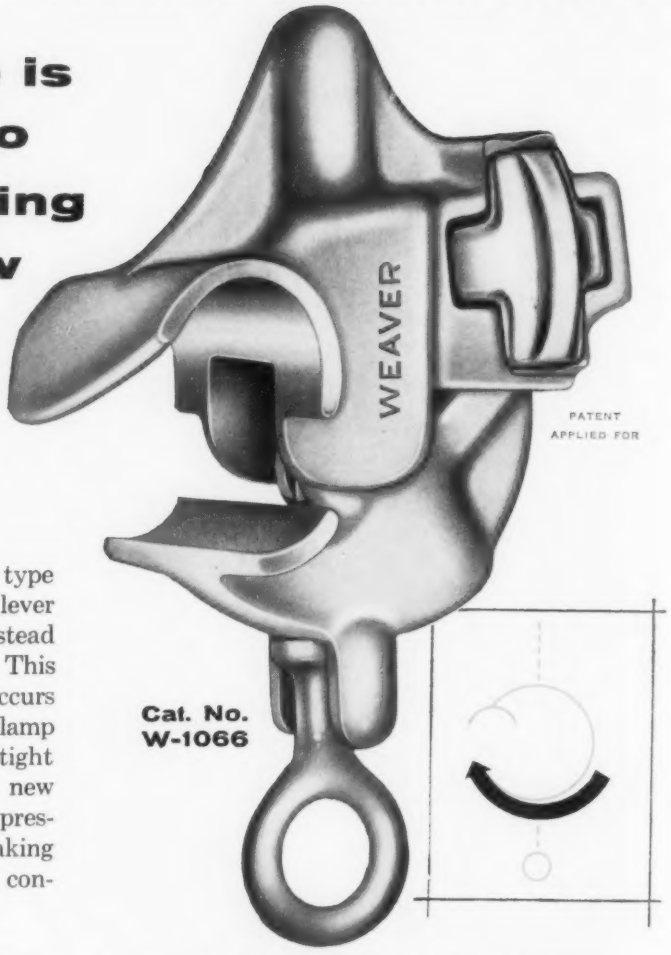
In Canada:
Royal Electric Company (Quebec) Ltd., Pointe Claire, Quebec

NEW TYPE HOT LINE CLAMP BY

WEAVER

ASSURES BETTER, PERMANENT CONNECTION

...more pressure is transmitted to conductor by using an entirely new principle for hot line clamps



WEAVER has developed a new type Aluminum Hot Line Clamp using the lever and fulcrum method for tightening instead of the ordinary straight line method. This principle eliminates the friction that occurs in the bolt-and-slider type of hot line clamp when the slider begins to pull up tight against the conductor. With the new WEAVER Hot Line Clamp, greater pressure is transmitted to the conductor making a higher conductivity, lower resistance connection... with less effort!

- Heavy duty spring assures constant contact pressure
- Fewer turns are required to open and close the clamp
- Two large grease recesses keep bolt fully lubricated ... won't drip at high temperatures
- Bell-mouthed and machined wire-bearing surfaces eliminate danger of damage to conductor
- Ears seat firmly in the hot stick and, when open, saddle drops out of the way for safe, easy installation
- Exceptionally long contact surface is the maximum length that can be tightened efficiently with one bolt
- Operates at a lower temperature than the conductor

J. A. WEAVER Company

2110 Howard St. • St. Louis 6, Mo. • GArfield 1-6336

ROYAL "POWR-KORD"

Heavy Duty Extensions are a cinch to sell. They're available in one quality (the very best) . . . two types (rubber and vinyl) . . . three colors (black, red, yellow) . . . four wire sizes (12, 14, 16, 18) . . . and over five handy cord lengths (10 to 100 ft.). Satisfy *every* customer with the complete line of Royal "POWR-KORDS." Want complete facts? See your Royal representative.

ROYAL ELECTRIC
...an associate of

ROYAL ELECTRIC CORPORATION
PAWTUCKET, RHODE ISLAND
In Canada:
Royal Electric Company (Quebec) Ltd., Pointe Claire, Quebec

CRESCENT

ABC

ARMORED CABLE TYPE ACT

With Improved Features

- EASIER
- QUICKER
- SAFER

PLASTIC INSULATED CONDUCTORS

are clean, easy stripping, with solid, clear colors, and minimum diameter for easier installation in boxes.

PAPER TAPE

which is tough, moisture-resistant yet easily removed, gives protection to the insulated conductors.

INSULATED BUSHING

for protection against sharp ends of armor, furnished with each coil of cable.

BOND STRIP UNDER ARMOR

is used in all sizes. A flattened aluminum bonding wire in contact with the under side of each convolution of the galvanized steel armor assures a permanent, low resistance through armor to ground.

PREFABRICATED BREAKING LINES

At intervals of every 1½ inches on CRESCENT ABC Armored Cable you will find a small cut mark. This cut mark shows the location of a prefabricated breaking line inside the armor.

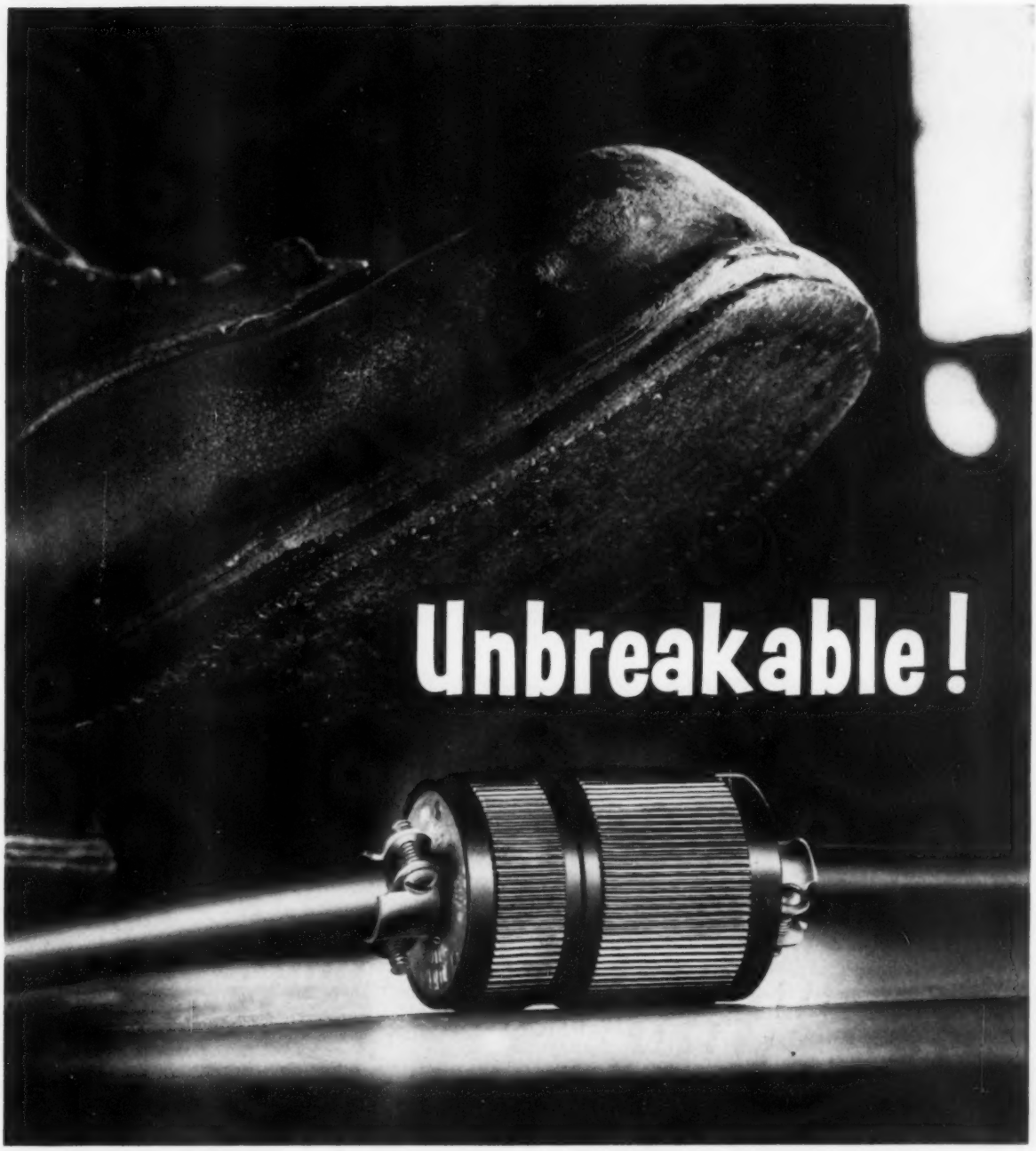
ONLY a few short strokes of a hacksaw guided by the cut mark are required to cut through ONE outer ridge, and a bend by hand severs the armor. By actual test, this saves 30% of the time ordinarily required. A clean separation results, with no sharp edge. There is no chance of injury to insulation because only one OUTER ridge is cut.

THE prefabricated breaking lines in the armor are so made that **THERE IS NO REDUCTION** of tensile strength, bending qualities, crushing resistance or electrical conductivity. This armor construction meets all requirements of Underwriters' Laboratories.

CRESCENT INSULATED WIRE & CABLE CO., INC.

TRENTON, NEW JERSEY

OVER 75 YEARS EXPERIENCE



ROYAL PVC Caps and Connectors

in non-interlocking and ROYALOK (interlocking) types

Why stock attachment caps and connectors in a variety of materials and designs when one all-vinyl line — Royal PVC — is right for every job, every customer? Royal PVC devices last *longer* because they're made *stronger* — can't break, crack or chip. Oil, grease, acid resistant, too. Other easy-to-sell features include dead-front caps . . . one-piece, all-vinyl connectors . . . blades and contacts permanently locked in solid vinyl. Black and grey; 2-wire, 3-wire, 4-wire, 125V and 250V.

See your Royal representative for details on the big PVC line!

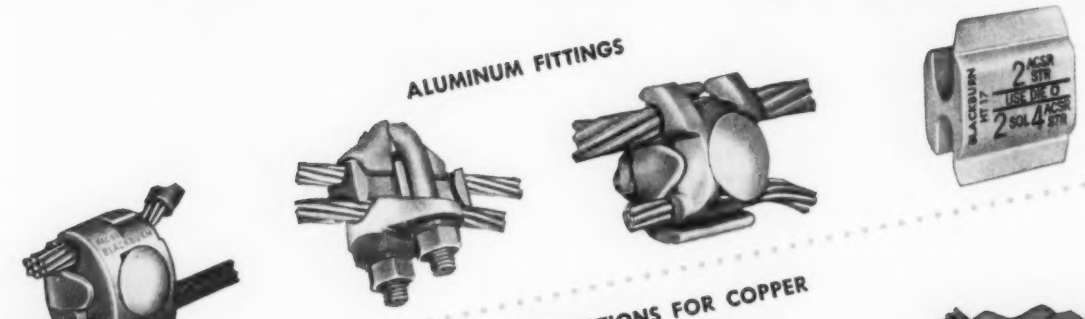
ROYAL ELECTRIC ...an associate of LTEC

ROYAL ELECTRIC CORPORATION
PAWTUCKET, RHODE ISLAND

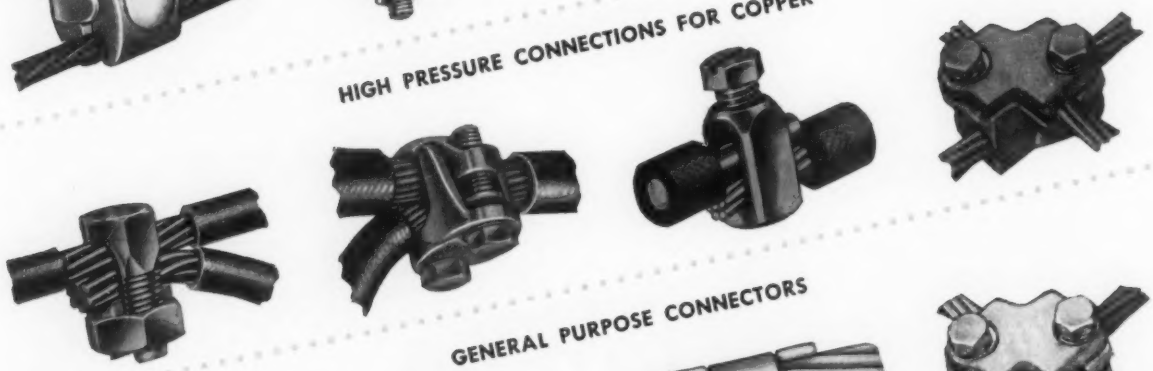
In Canada:
Royal Electric Company (Quebec) Ltd., Pointe Claire, Quebec

HARRY HUGHES Says...

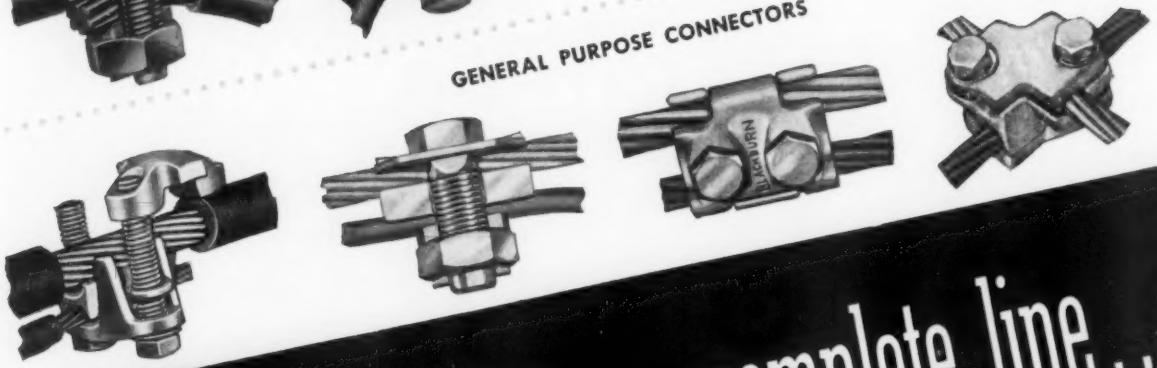
ALUMINUM FITTINGS



HIGH PRESSURE CONNECTIONS FOR COPPER



GENERAL PURPOSE CONNECTORS



BLACKBURN —a complete line...

BLACKBURN *Electrical* EQUIPMENT

FAST DEPENDABLE SERVICE FROM OUR CENTRALLY LOCATED FACTORY

JASPER BLACKBURN CORPORATION

"Blackburn doesn't compete against their distributors"

MEMO FROM: Harry Hughes

TO: Ken Way

SUBJECT: Your Distributor Policy

Ken: If I may add my two bits to Red Salmon's letter that appeared in February Wholesaling, I would like to compliment you on your distributor policy. The fact that Blackburn doesn't compete against their distributors, but rather channels the business through their distributors, is a good selling point for any company.

There is nothing more irritating than to find that you have lost an order because you were competing with the manufacturer, or to learn that a manufacturer -- one of your own suppliers -- has sold an order directly right at your own back door. Blackburn's policy of always referring the customer means more money in our pocket -- and that's why we're in business.

Thanks.

Harry Hughes

Harry Hughes

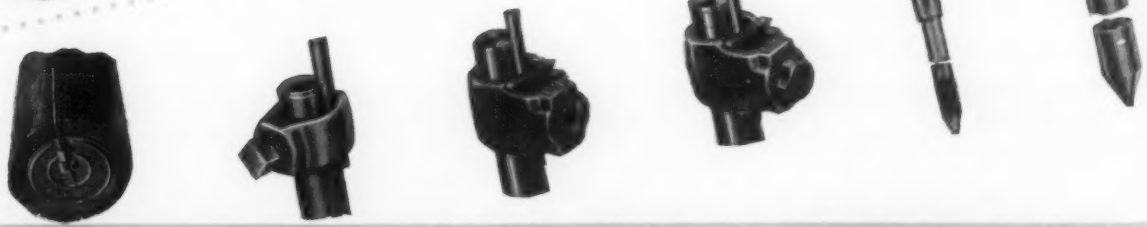
Hughes Supply, Inc.

HARRY HUGHES,
Vice President
Hughes Supply,
Incorporated
Orlando, Florida

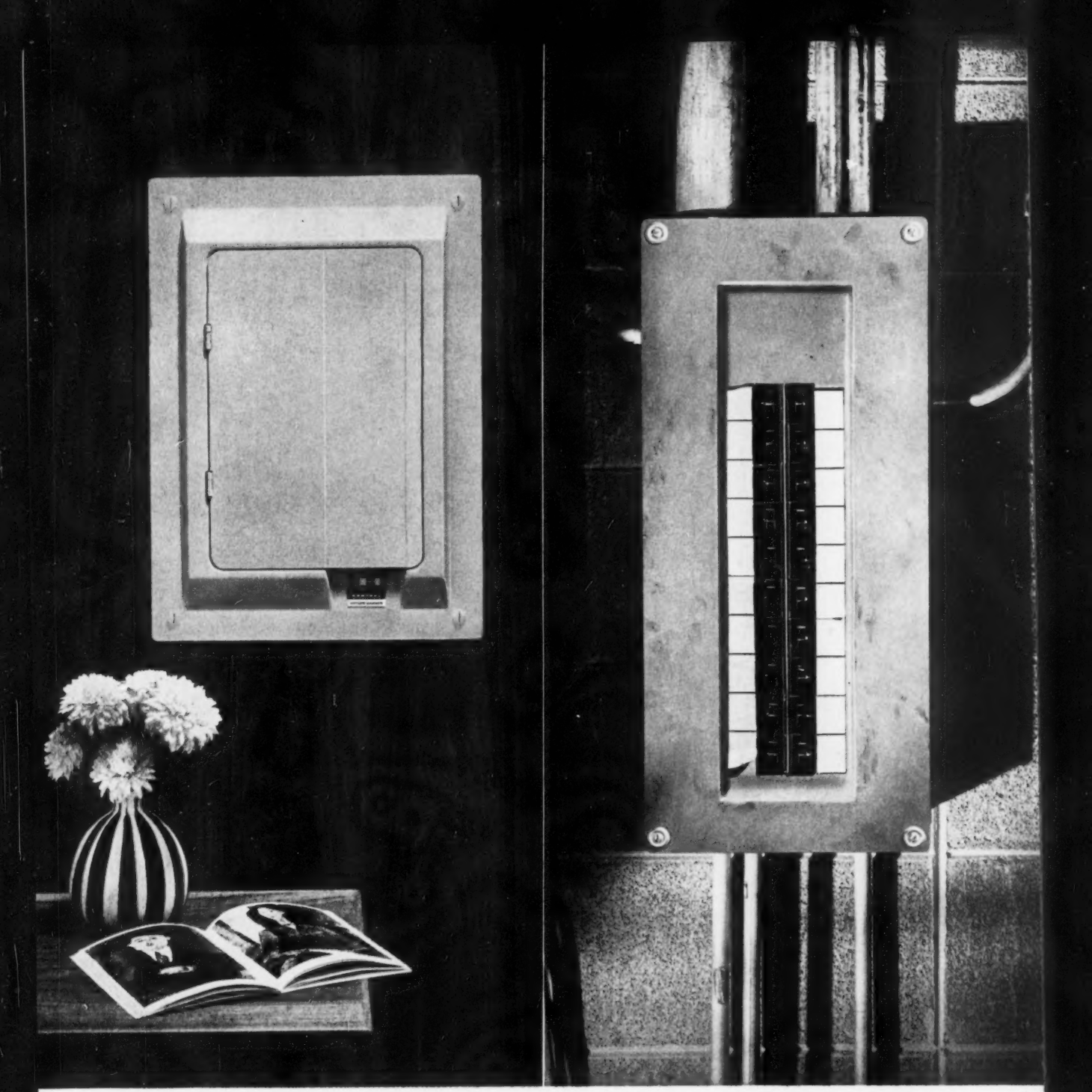
designed with the distributor in mind

TERMINAL LUGS AND SPLICERS

GROUNDING DEVICES



1525 Woodson Rd. • St. Louis 14, Mo. • WYdown 3-9430



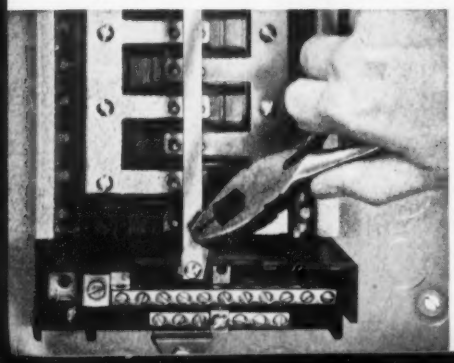
CONTRACTORS REALLY GO FOR THIS SIMPLIFIED N.I. SYSTEM—NO SPECIAL TOOLS REQUIRED FOR INSTALLATION.

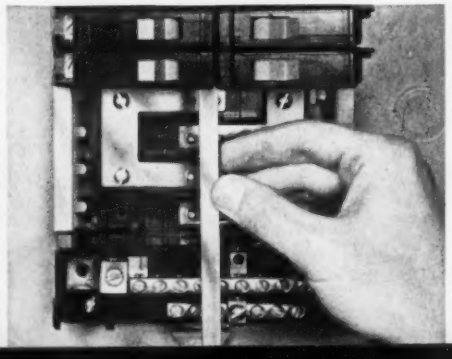
Safetybreaker eliminates fussy systems, makes it impossible to omit or incorrectly position pins or tabs. Here's the Safetybreaker method:

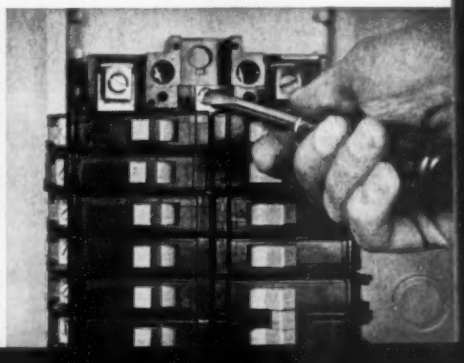
1 Simply tear off soft plastic spacers to loosen locking-bar screws, and let locking bar drop.

2 Plug in breakers in top portion of panel. Slide bar to top of panel.

3 Plug in remaining breakers. Tighten two screws to lock the NI system.







Why stock the old-fashioned "basement gray" box ?

Offer your customers this new, smartly-styled safetybreaker... it doesn't cost a nickel more

(and often costs less!)

Here's a bonus in beauty and protection that gives contractors—and their customers—extra features at no extra cost! A great product leader for you to open up new accounts!

Modern Appliance Styling lets contractors show how good the wiring job is. This soft sandalwood finish *belongs* upstairs, convenient to the kitchen, saving contractors' money on those heavy wiring runs.

Eliminates Housewife Confusion and saves contractor unnecessary callbacks. Simple as a light switch, with easy-to-see "on" and "off" positions. There is no tripped mid-position to harass the homeowner, no calls to reset the breaker because the housewife mislaid or misread instructions.

Inside as Superior as the Outside. Won't rust, won't corrode because every operating part is either stainless steel or heavily plated. Double protection with magnetic trip for short circuits *and* bimetal trip for sustained overloads. Easier to install with plenty of wiring room, no knuckle-skinning wire guides.

What's new at Cutler-Hammer? This new Safetybreaker is typical of the *better* products you'll be getting from Cutler-Hammer to help make *your* selling easier. We've added new sales engineers to help you when you need help. Introduced new distribution policies to make service better in every respect. Like to know more about what's new at Cutler-Hammer? See your Cutler-Hammer representative soon.

WHAT'S NEW? ASK...

CUTLER-HAMMER

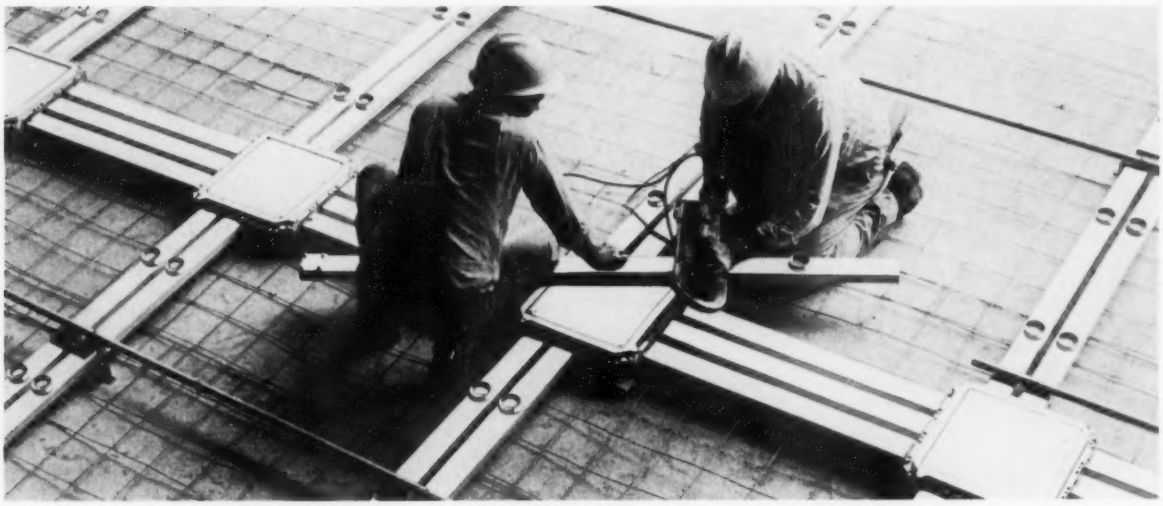
Cutler-Hammer Inc., Milwaukee, Wisconsin • Division: Airborne Instruments Laboratory • Subsidiary: Cutler-Hammer International, C. A. Associates: Canadian Cutler-Hammer, Ltd.; Cutler-Hammer Mexicana, S. A.

VISIT COPE AT THE N.A.E.D. SHOW

GET DISTRIBUTOR DETAILS ON NEW

COPE UNDERFLOOR DUCT

The Only Underfloor Duct Sold Exclusively through AUTHORIZED COPE ELECTRICAL WHOLESALERS



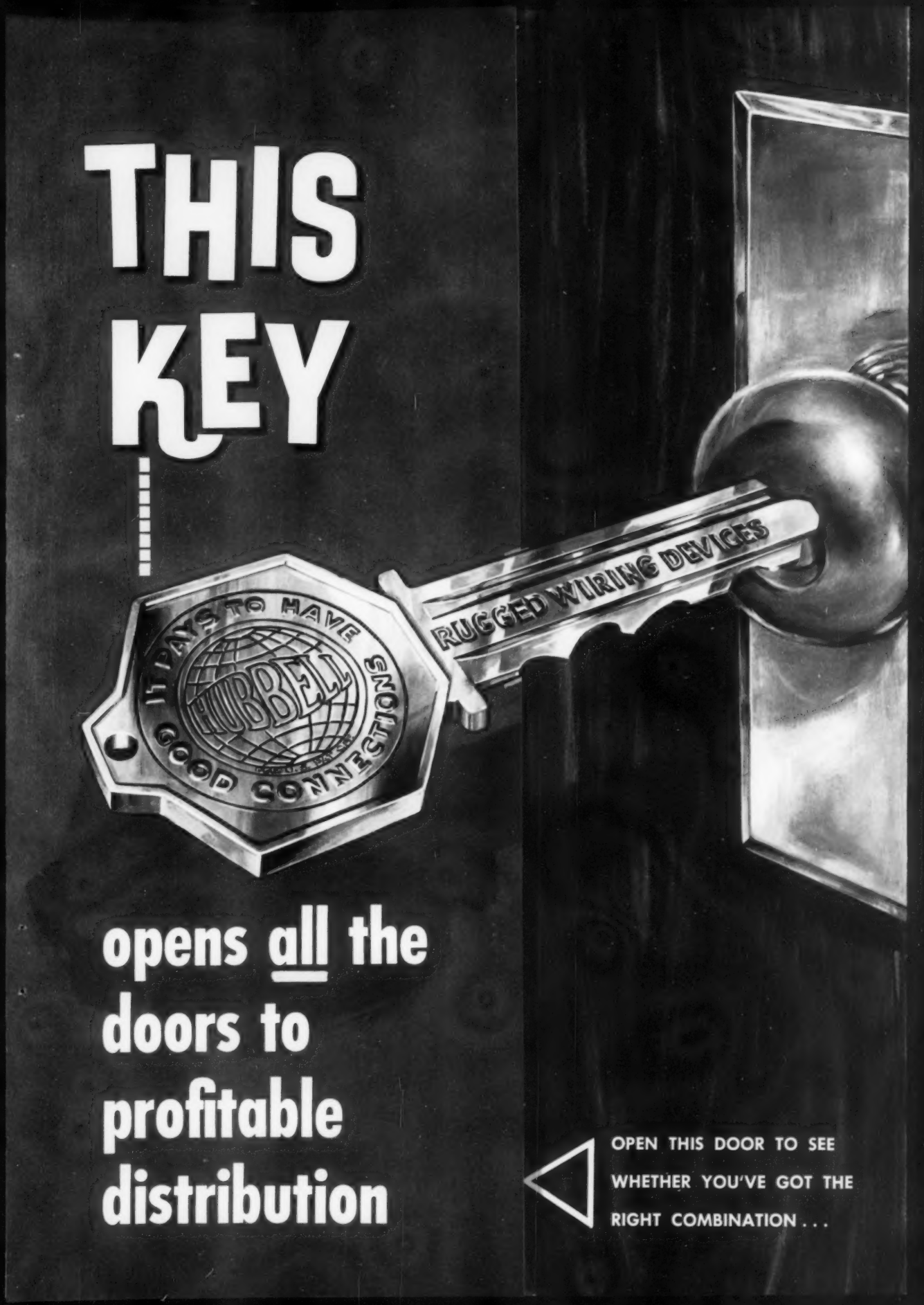
Cope Underfloor Duct for Power • Telephone • Intercom Distribution Systems
Formerly distributed as Spang Underfloor Distribution Systems

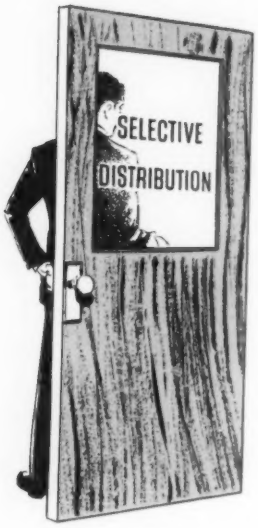
Distributors of Cope Cable Wireway, Ladder and Channel make more sales—more *profit*—thanks to Cope's unique and exclusive distributor policy. That policy now covers Cope Underfloor Duct Systems . . . newest addition to the Cope product line and the most modern method of wiring distribution for office buildings and other commercial applications. Cope Cable Supporting Systems for power and control cables *plus* new Cope Underfloor Duct for wiring distribution now offer Cope distributors a franchise unequalled in the electrical field. Ask about the new opportunities for Cope distributors in *your* area . . . our Booth Number at the Show is 109.

IF IT'S A **COPE PRODUCT** *IT'S SOLD* **ONLY** *THROUGH* **AUTHORIZED COPE ELECTRICAL WHOLESALERS**

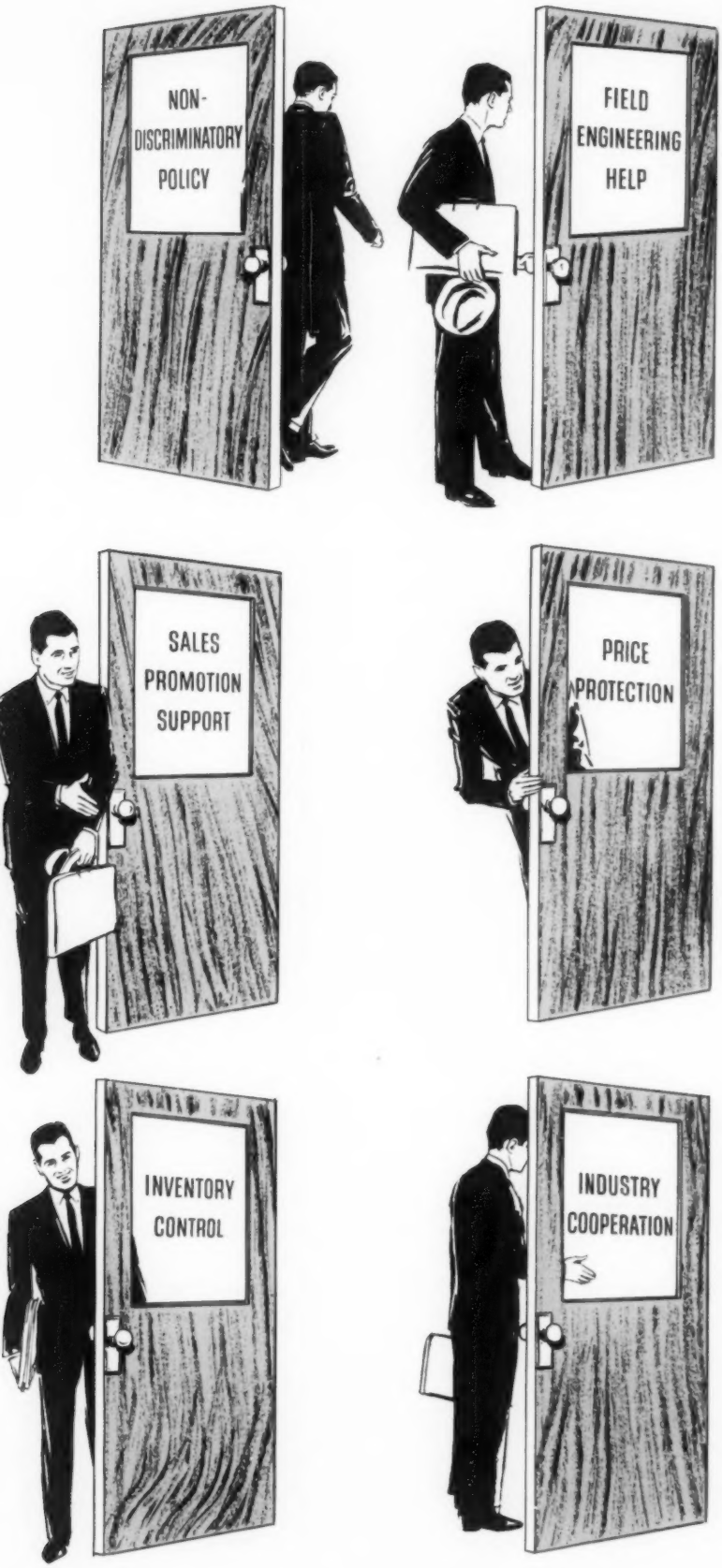
TJ COPE

DIVISION OF ROME CABLE CORPORATION / COLLEGEVILLE, PENNSYLVANIA (DEPT. I)
Originators of Cope Wireway, Ladder and Channel—the first integrated line of Cable Supporting Systems


THIS KEY
IT PAYS TO HAVE GOOD CONNECTIONS
HUBBELL
RUGGED WIRING DEVICES
opens all the doors to profitable distribution
OPEN THIS DOOR TO SEE WHETHER YOU'VE GOT THE RIGHT COMBINATION . . .



SINCE 1888 . . . COOPERATION



ON, NOT COMPETITION

IT PAYS TO HAVE GOOD CONNECTIONS

and Hubbell's KEY MEN ⟶ will help you get them

HARVEY HUBBELL, INCORPORATED

Rugged Wiring Devices

Bridgeport 2, Connecticut

ALABAMA

James E. Heusser
312 Glynn Drive
Birmingham 15
VE 3-0442

ALASKA

John P. Bagoy & Assoc.
P.O. Box 1005
Anchorage

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San Leandro
EI 1-2834

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CApital 3-1167

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Walter C. Haffner
Stuart E. Pentz
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James I. Jeffers
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Del Mar (home)

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Denver 2
Keystone 4-6789

Paul A. Douden, Jr.

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Monroe
Amherst 8-5453

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Chevy Chase Branch
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WOodley 6-8289

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EVergreen 8-2841

Rufus F. Carpenter
3407 W. Ellicott St.
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REdwood 7-1414

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Harry W. Shropshire
860 Barton Woods Rd., N.E.
Atlanta
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Chicago 7
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Marshall Yohana

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Indianapolis
LIberty 6-8857

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Wakonda Village
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1800 Watrous Ave.
Des Moines
AT 8-9403

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Louisville
EM 8-5044

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HU 2-1161

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Baltimore
BE 5-4161
5005 Lodestone Way, Apt. F
Baltimore 6 (home)
IVanhoe 8-6135

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JUniper 6-8397
DAvis 6-2119

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Andover
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Lathrup Village
ELgin 6-2625

Dan A. Nesbitt, III
1977 Washington
Birmingham
MI 6-9350

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Wayzata
GReenwood 7-2220

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St. Louis (home)
MOhawk 4-6487
Box 6031 (mail)
Hannegan Station
St. Louis

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348 Forest Hill Dr.
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Greensboro
CY 9-3967

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Charlotte 7
EMerson 6-2451

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Columbus 14
Amherst 3-4191

George H. Swilling
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JAckson 6-3380

Ans. Ser. 316 Marion Bldg.
Cleveland
SUperior 1-1855

William H. Teegardin
7401 N. Timberlane Dr.
Cincinnati 43
LOcust 1-6931

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David J. Lawless, Jr.
Tulsa

OREGON

David King
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1220 S. W. Stark St.
Portland
CA 7-1990

G. H. A. Gustafson

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Louis Harbrecht
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Levittown
Windsor 5-8795

Lester P. Reed
3114 Yale Ave.
P. O. Box 82
Camp Hill
REgent 7-9334

William J. Hogan
155 Rolshouse Rd.
Pittsburgh 37 (temp.)

RHODE ISLAND

Arthur R. Newman
58 Firglade Dr.
Cranston
Williams 2-2327

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J. D. Martin Co.
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Dallas 7
RIverside 1-3471, 1-3472

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BElmont 2-8853

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Frank M. Strohecker
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2207 First Ave., So.
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MA 3-0357

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C. W. Harris

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John F. Nolan
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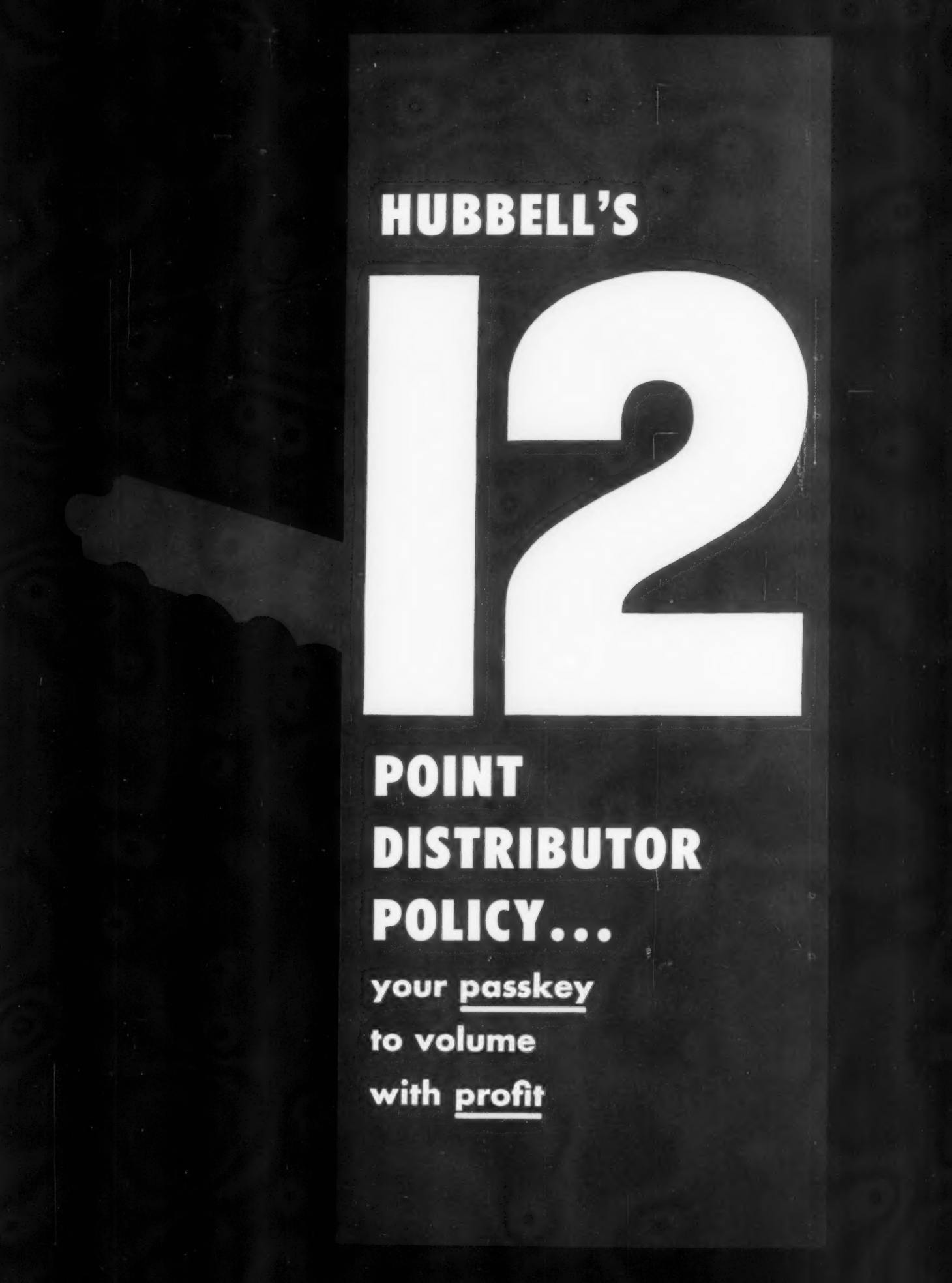
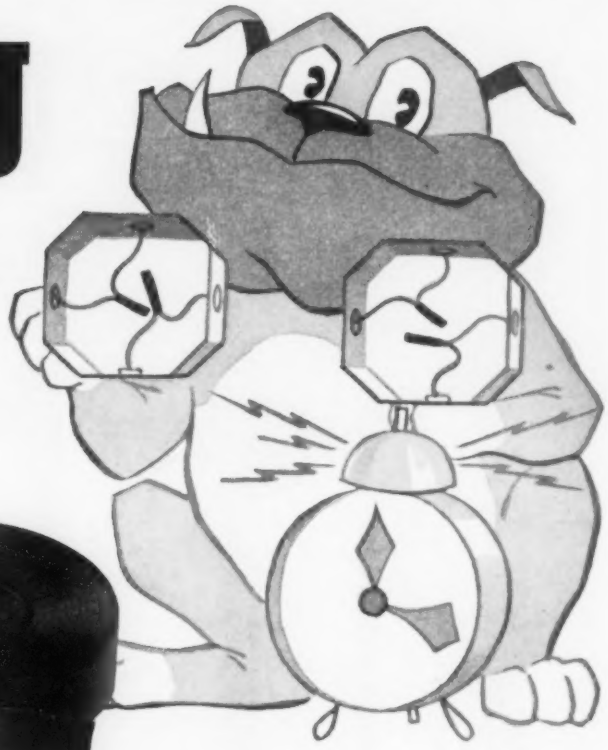
Milwaukee
HOpkins 4-6322


HUBBELL'S
12
POINT
DISTRIBUTOR
POLICY...
your passkey
to volume
with profit

Twice the work in half the time!

Bull Dog

PLASTIC ELECTRICAL TAPE



Does the work of rubber tape *and* friction tape! Saves time with swift once-only splicing . . . looks better, lasts longer because it sticks and *stays*, conforming to any shape. Low bulk makes it especially good for neat, close tolerance work. Won't creep or thin in wide range of temperatures. Costs no more. Anyway you look at it, BULL DOG VINYL PLASTIC is economy all around! BULL DOG (.007″ thickness) has minimum dielectric strength of 10,000 volts.

There's a BULL DOG TAPE for every purpose

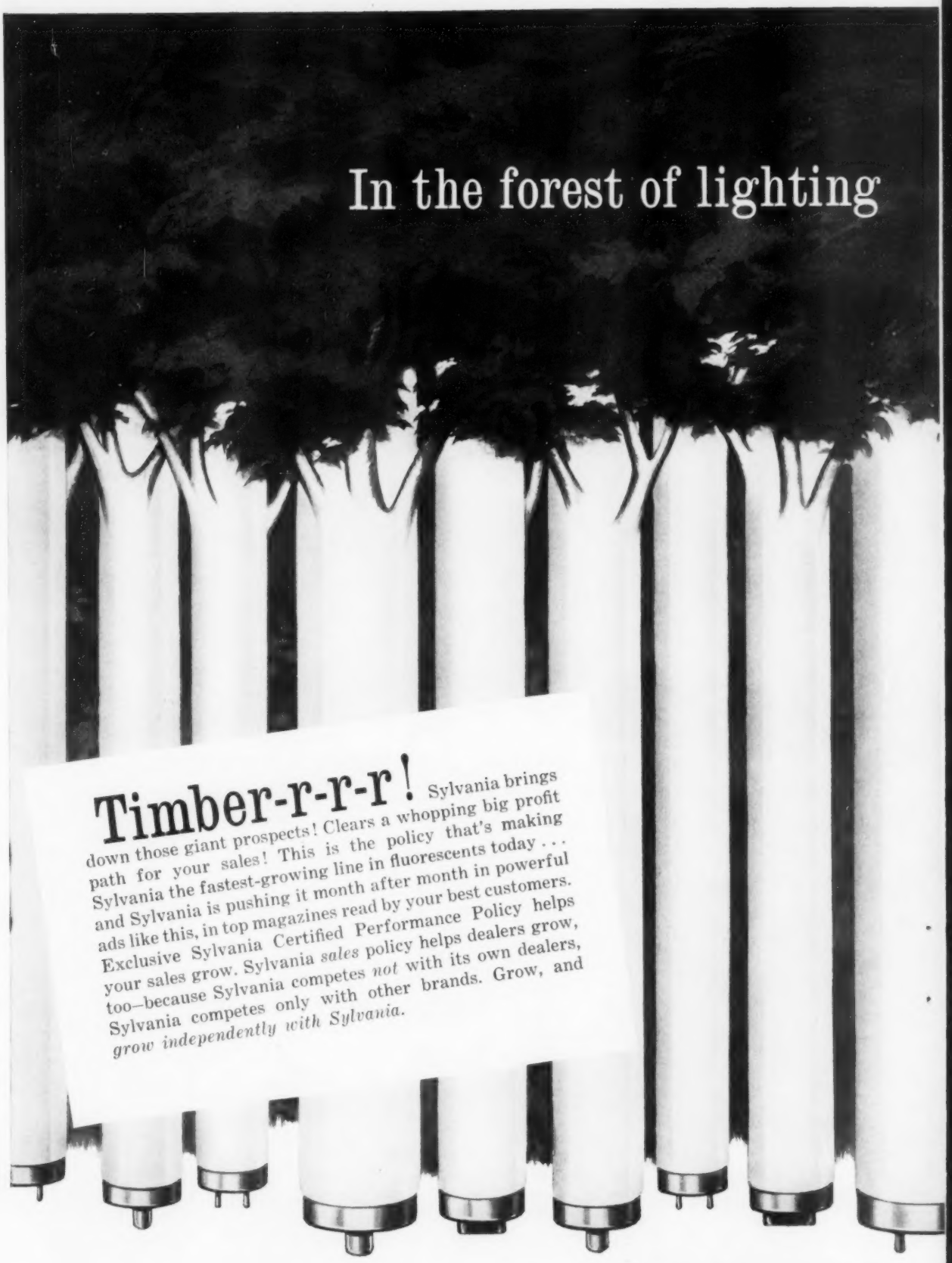
• *Friction* • *Rubber* • *Plastic*

Sold only through verified wholesalers

AMERICAN BILTRITE RUBBER COMPANY
BOSTON WOVEN HOSE & RUBBER DIVISION
BOSTON 3, MASSACHUSETTS

BOSTON

Also manufacturers of Garden Hose, Matting, Stair Treads, Automotive Hose



Timber-r-r-r! Sylvania brings down those giant prospects! Clears a whopping big profit path for your sales! This is the policy that's making Sylvania the fastest-growing line in fluorescents today . . . and Sylvania is pushing it month after month in powerful ads like this, in top magazines read by your best customers. Exclusive Sylvania Certified Performance Policy helps your sales grow. Sylvania *sales* policy helps dealers grow, too—because Sylvania competes *not* with its own dealers, Sylvania competes only with other brands. Grow, and *grow independently with Sylvania.*

claims.....this sure guide to quality remains unchanged...

"If at any time a Sylvania Fluorescent Lamp fails *in your opinion* to provide better performance than any other brand fluorescent lamps, on the basis of uniformity of performance, uniformity of appearance, maintained brightness and life, it may be returned to the supplier for *full refund of purchase price.*"

Only Sylvania backs your purchase with this money-back guarantee. You'll find it in your Sylvania *exclusive* Certified Performance Policy.

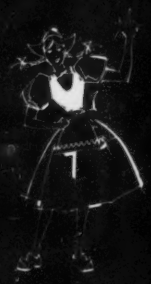
Only Sylvania gives you this positive assurance of lower TCL (Total Cost of Lighting), which means cost of lamps *plus* power *plus* maintenance.

Want better light? Want to be *sure* you're getting it? Call your Sylvania representative or write: Lighting Division, Sylvania Electric Products, Inc., Dept. 624, 60 Boston St., Salem, Mass. In Canada: Sylvania Electric (Canada), Ltd., Montreal.

SYLVANIA

Subsidiary of GENERAL TELEPHONE & ELECTRONICS

New from Johns-Manville

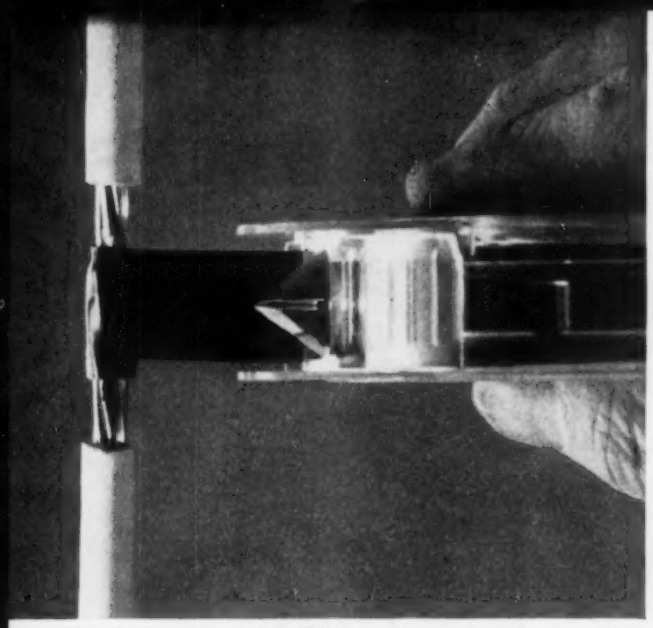


1. *"Tape-and-tear" in single action!* **2.** *Special "grip-strip" for faster starting!* **3.** *Permanently shielded cutter!* **4.** *Full 66' of finest plastic tape made!* **5.** *Preloaded . . . ready to go!* **6.** *No moving parts to snag hands, clothes!* **7.** *Protects tape against dirt, grease!* **8.** *Big center hole for easy handling!* **9.** *Can't dull or clog!* **10.** SAME PRICE AS BEFORE!

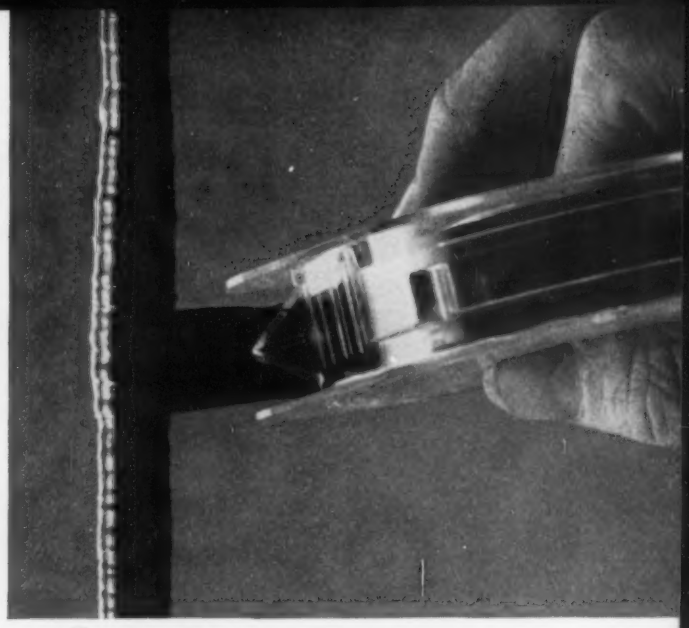
It's here! The new, unbeatable sales combination in plastic tape!

Famed Johns-Manville *Dutch Brand* Plastic Electrical Tape . . . PLUS a brand-new tape dispenser with *all ten* of the features shown above! It's a great, new sales combination backed by hard-hitting advertising and publicity to electrical contractors everywhere. The result—*more* tape sales and *more* customers for every J-M *Dutch Brand*® Distributor!

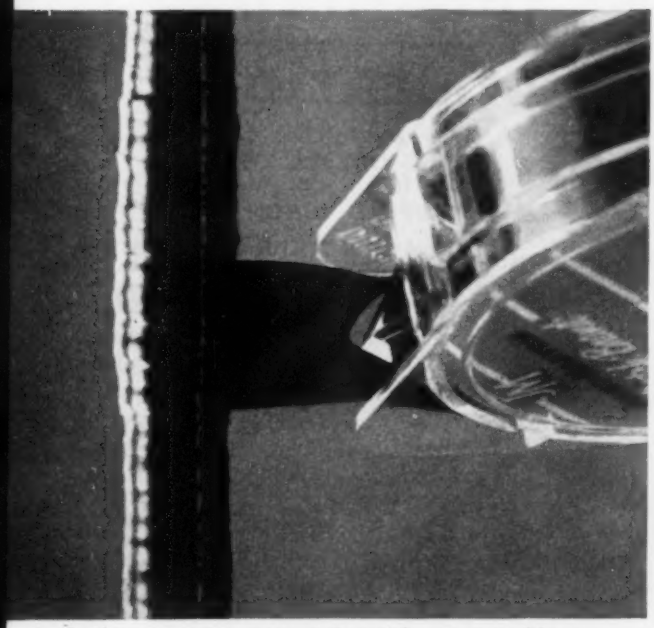
What's more, J-M gives its distributors many other important sales advantages, including:



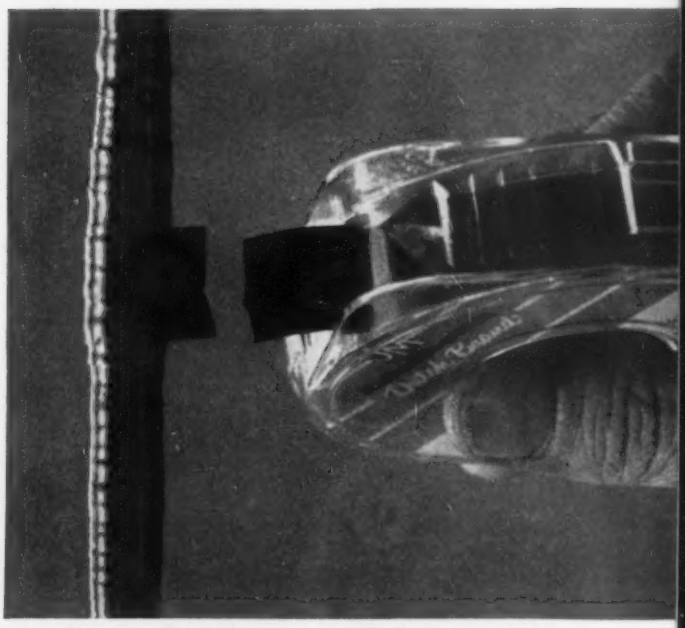
A. *Here's how it works: Wrap splice as usual.*



B. *Puncture tape.*



C. *Pull . . . tape tears straight without stretching.*



D. *New end stands up . . . ready for next splice.*

• **OPPORTUNITY** to take *full advantage* of quantity discounts because J-M, and J-M alone, makes every major type of electrical tape.
• **OPPORTUNITY** to sell *all* potential customers in their territory because J-M has no "restricted" lines of tape.
• **OPPORTUNITY** to promote products made by one of the world's best-known, most-respected manufacturers of industrial products.

Get the full story on all the sales advantages offered J-M Distributors! Write or wire E. H. Wells, vice-president, *Dutch Brand* Division, Johns-Manville, Box 14, New York 16. In Canada: Port Credit, Ont. Cable: Johnmanvil.

JOHNS-MANVILLE

JM PRODUCTS

OTHER FINE ELECTRICAL TAPES FROM J-M . . .

J-M Dutch *Friction Tape* | *J-M* Dutch *Special Purpose Tapes* | *J-M* Dutch *Rubber Tape*

Remember—Johns-Manville, and ONLY Johns-Manville, makes every major type of electrical and industrial tape!

JOB-PROFIT TOOLING IDEAS

FROM GREENLEE

New lightweight Wire Puller for fast one-man operation

- **WEIGHS ONLY 29 LB**
- **TWO-SPEED WINCH . . . 3 TO 1 AND 9 TO 1 RATIOS . . .**
- **PATENTED RATCHET ACTION**

Easily carried and operated by one man, the new GREENLEE No. 766 Wire Puller requires only 30-lb handle pressure to pull 1500 lb. Wire can be pulled at any angle from large or small outlet boxes or from the end of exposed conduit. At all times the pull is in line with the conduit . . . no strain on the hanger or outlet box. No loose cable to contend with . . . reel holds 200 feet of aircraft steel cable. Patented winch ratchet action . . . open-side pulley support for easy access to any outlet box. Typical performance: Large Midwest contractor reports pulling four strands of 4/0 wire through 165 feet of 2½-inch conduit with two 90° bends. Time, *20 minutes.*

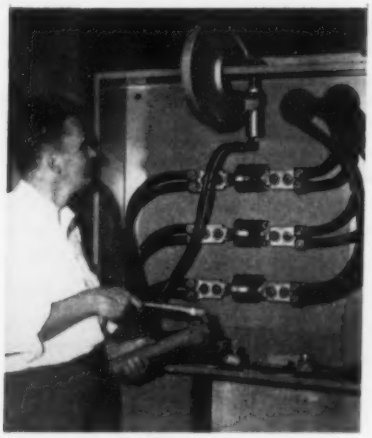
For large-size cable pulling use Greenlee No. 765 Cable Puller

ONE-MAN OPERATION • 7500 LB PULL • TWO OPERATING SPEEDS

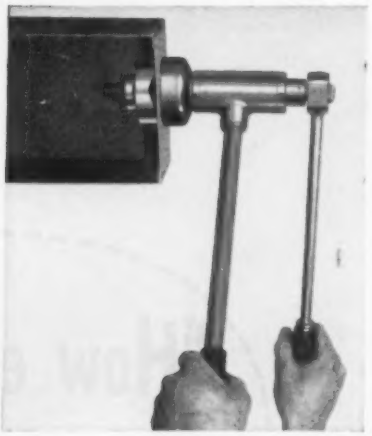
Portable . . . easy to set up and operate. Use it on exposed or concealed conduit. Pull is in line with the conduit with no strain on the hangers or outlet boxes. Can be equipped with flexible elbow attachment for pulling from concealed conduit . . . permits placing puller at any desired distance from end of conduit.

Hand and power drivers for knockout punches

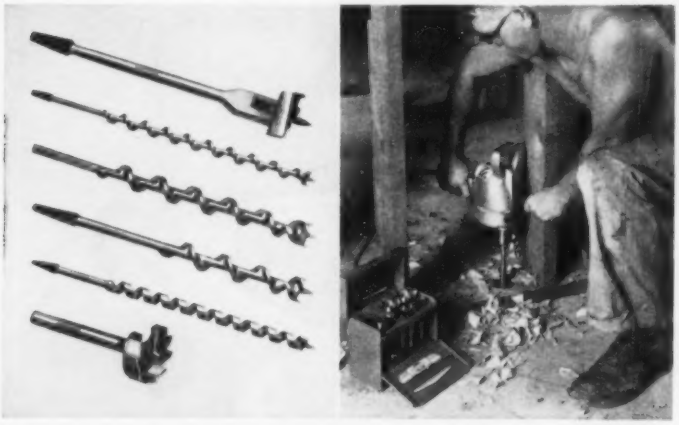
Greenlee No. 7646-A hydraulic knockout punch driver develops 11 tons' ram force to easily drive punches through 10-gauge metal . . . cuts ½" thru 5" conduit openings in seconds. Many times faster than wrench method . . . can be used in cramped quarters. Timesavings quickly pay for this efficient tool. Designed to drive all Greenlee knockout punches. It is available singly for punches already owned or is available in sets with 6 or 10 punches.



Greenlee one-shot knockout punch drivers are fast, lightweight, and powerful . . . easily operated by one man. Require no pre-drilling or step-up punching to make conduit openings . . . high-strength aluminum "C" frame. Punch cuts through 10-gauge steel with ease. Two sizes: No. 1731 to punch holes for ½", ¾", 1" conduit and No. 1732 to punch holes for ½" thru 4" conduit. Hand or power pump operated.



Greenlee ratchet knockout punch driver makes conduit openings 6 to 8 times faster than with wrench method. Easily operated in any position. Use with standard Greenlee knockout punches from ½" thru 3". Available singly or with set of punches for ½" thru 2" conduit. **Greenlee makes a complete range of knockout punches for 1/2" thru 5" conduit . . . fast, easy cutting through 10-gauge metal . . . clean, accurate holes.**

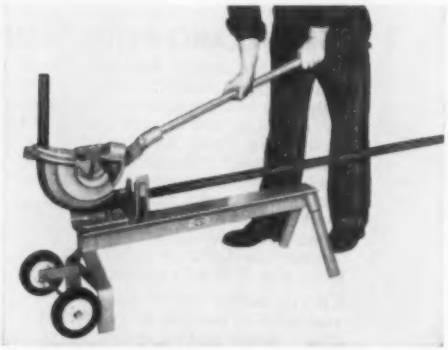


Fast-boring Greenlee bits for electrical work

Jobs go smoother when you standardize on Greenlee precision-made boring tools. Power drill and hand brace types . . . various styles and lengths for all types of electrical work. Electricians' auger bits, bellhangers' drills, solid-center auger bits, expansive bits, ship augers, pipe bits, spade-type power bits. Highest quality for fast, accurate boring and long life under hard usage.

Hand ratchet benders

Fast, easy way to make bends up to 90° in ½" thru 1½" rigid conduit. Greenlee ratchet bender is self-contained and easily portable. Ratchet action for short, powerful strokes . . . easy-to-reach ratchet release . . . built-in 0° to 90° bending gauge . . . swing-away pipe clamp for easy removal of 90° bend . . . direct handle operation for quick bending of small pipe. No. 1800 for ½", ¾", 1" conduit. No. 1801 for 1¼" and 1½" sizes.



WRITE FOR CONDENSED CATALOG E-240A. GREENLEE TOOL CO., 1954 COLUMBIA AVE., ROCKFORD, ILLINOIS

TOOLS FOR CRAFTSMEN

GREENLEE

JOB-PROFIT TOOLING

. . . cost control for contractors

***KILLARK XMCS MOTOR STARTER**

. . . with important features found in every Killark enclosure of this type. Copper-free aluminum casting, ribbed for added strength and faster heat dissipation. Split box design provides easy accessibility, simple wire pulling. Surfaces precisely ground for tight fit. Guarded start-stop and reset buttons; front operated. Ideal for compact switch rack mounting. U.L. and C.S.A. approved.

Killark motor starters are available in manual or magnetic styles, single or two speed; reversing, special and combination. Sizes 0 through 5. Models for explosion-proof, dust-tight, weather-proof installations.

Superior performance is also provided by Killark disconnect switches, circuit breakers, panel boards and other large enclosures. Write for the Killark catalogs. 6928

Each new Killark design takes final shape on the drawing board only after extensive field tests, on-the-job surveys, and consultations with electricians and contractors. By combining actual user experience with their own engineering skill, Killark is able to produce electrical fittings and fixtures that consistently give better performance.

All-aluminum construction is another reason why Killark enclosures operate with greater efficiency. Fittings and fixtures made from this lightweight metal dissipate heat much more effectively, allowing thermal devices to function accurately. They're non-magnetic and non-sparking. They resist attack by rust and corrosion that causes malfunction and breakdowns.

"Killark equipment provides unmatched performance ...because your customers helped design it!"

Killark

ELECTRIC MANUFACTURING COMPANY

Vandeventer and Easton Aves. *St. Louis 13, Mo.*

In Canada: Killark Electric of Canada, Ltd., 421 Islington Ave. South, Toronto 18, Ont.

NEW! Pilot-lighted directory on a new style G-E Master Selector Switch shows instantly which of 12 circuits are ON. Also has tiny locator light (permanently ON) that permits reading the directory and operating the switch in the dark.

From General Electric, to help ...a more versatile, easier

Looking for a bright new idea to boost wiring device sales to your customers?

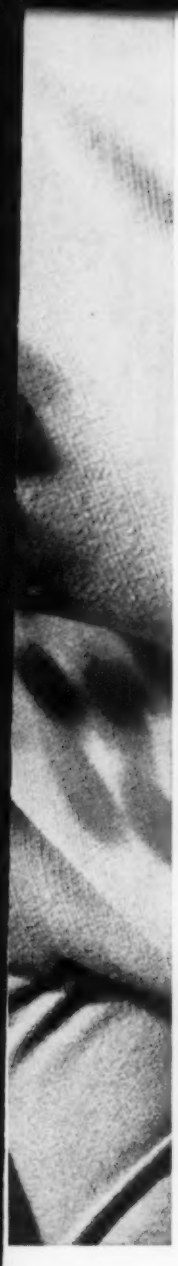
Show them this new G-E Remote-Control Wiring line. It makes any contractor sit up and take notice!

Electrical contractors like the way this easier-wiring, low-voltage system lets them offer the convenience of 3-way or 4-way switching — at surprisingly low cost.

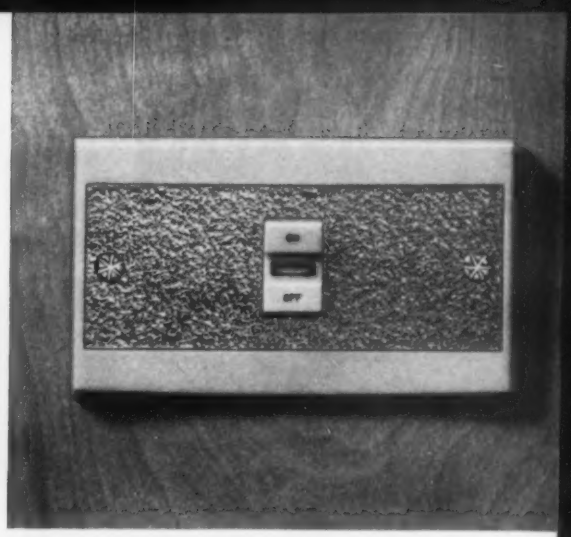
Builders like the way it adds sales appeal to houses.

Everybody likes the style, variety and convenience of these handsome new G-E Remote-Control switches.

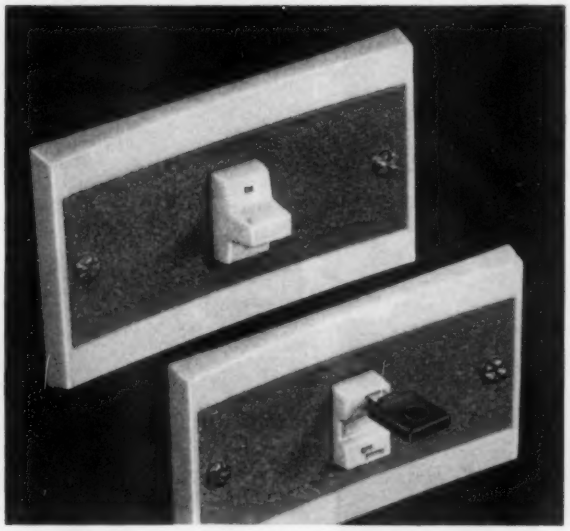
There's a new standard, push-button G-E Remote-Control wall switch, well marked for ON and OFF — plus a *locking* type — plus a *trigger* type. Each is available *non-lighted, locator*-lighted, or *pilot*-lighted.



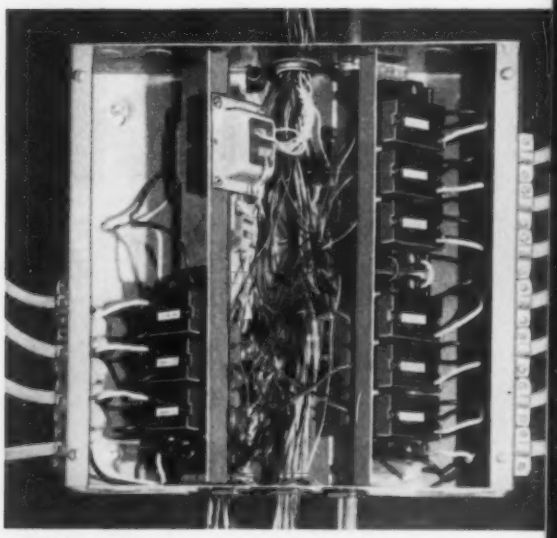
NEW! Switches that are easy to find in the dark. Now G-E Remote-Control wall switches are available with or without built-in locator lights.



NEW! Switches with built-in red pilot light. This new type of G-E Remote-Control switch is just the thing for controlling "hidden" lights.



NEW! Trigger and locking types. If your customers prefer an up-and-down "trigger" to the standard G-E Remote-Control push button, they can have it. The locking type prevents children from operating dangerous power tools, prevents tampering with lights.



NEW! "Plug-in" relay box. Provides quiet operation, easier tracing and changing of circuits if needed. It impresses contractors by simplifying wiring. A bus bar connects relays to line voltage, automatically, as they're plugged in — to provide a neat, orderly installation.

you get new business -wiring Remote-Control System!

In addition, there's the impressive new lighted Master Selector Switch — extension switches — an Interchangeable line switch.

Ask your General Electric representative to show you this exciting new G-E Remote-Control Wiring line. Watch it bring in new business! General Electric Company, Wiring Device Dept., Providence 7, R. I.

Progress Is Our Most Important Product

GENERAL ELECTRIC

stand out from
"LOOK-ALIKE"
lamp suppliers
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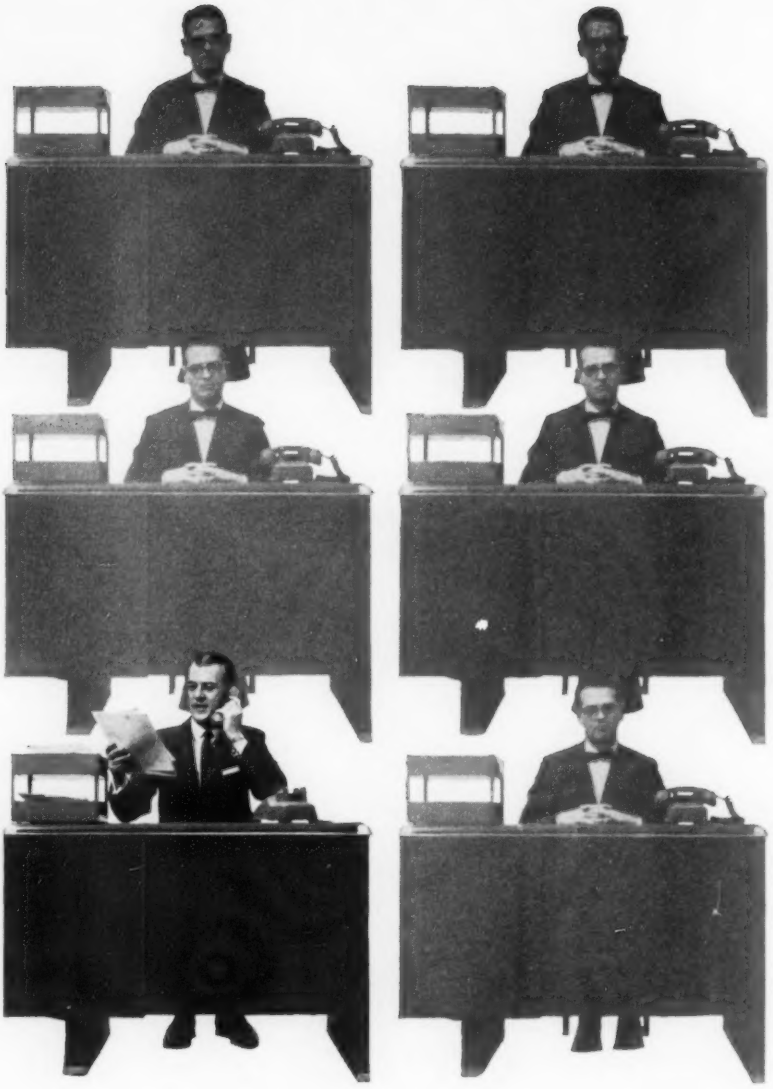
carry
CHAMPION LAMPS
and
GET MORE
REPEAT
BUSINESS



Instead of *losing* the business to any competitor who comes along carrying the same line of lamps, sell Champion Lamps and *keep* the business coming back to you as *the* supplier in your area.

Champion has been making *good* lamps — and *good* customers — for over sixty years.

CHAMPION Lamps

Your Best Buy in Lamps

CHAMPION LAMP WORKS, Lynn, Massachusetts

CHAMPION INCANDESCENT • FLUORESCENT

MARKET PLANNING GUIDE-BOOK

THE alternative to "flying by the seat of your pants" – as a salesman or a sales organization – is a planned approach. What such a plan should not be is a substitute for mature and intuitive judgment. What such a plan should be is an organized approach that seeks to achieve realistic goals.

Logically, a planned approach to marketing starts with a determination of the size and nature of the market being served. Once this has been measured with reasonable accuracy, then realistic sales goals can be set and steps taken to attain them.

The purpose of ELECTRICAL WHOLESALING's Market Planning Guidebook, which comprises 32 pages in this issue, is to assist distributor management and salesmen to organize their marketing approach with more precision. In the articles and worksheets that follow, emphasis is placed on the practical rather than the theoretical.

The subjects covered: how to determine your market potential and position *(page 86)*, how to organize your sales force for the most efficient coverage *(page 90)*, how to maximize your sales to new and present accounts *(page 94)*, and how to pinpoint ready product sales opportunities *(page 106)*.

MARKET PLANNING GUIDEBOOK

How To Determine Your Market Potential and Position

Market research is a sales tool that any distributor can use to advantage. The benefits are many—not the least of which is a basis for setting realistic sales goals. Here's a do-it-yourself approach that should enable you to pinpoint your market potential and position—with ease and minimum outlay.

THE PLIGHT of the industry today—low margins and profits—makes it imperative that electrical wholesaling management know with some degree of accuracy the size and nature of the market being served. Unfortunately, the typical distributor usually does not have a marketing research specialist in his employ who can determine accurate potentials, nor does he have the necessary funds to engage outside consultants for this task. However, this does not diminish the significance of market potential information to the electrical wholesaler.

In recognition of this need, a set of factors and outline work sheets have been developed which any distributor can use with available local data to estimate the potential of his supplies and apparatus market and analyze the results. And the computed potential and market analysis are not abstract figures, but are tailored to the specific territories and types of customers served by the individual firm.

Method of Approach

Since Census of Business data showing electrical wholesalers' sales by states and major trading areas are available normally only every five years, a method was developed to measure market potentials in intercensal years and for smaller geographic territories. The approach taken was to construct a market index which fitted the known market potentials available from the 1954 Census. It was then assumed that the index which is reliable for 1954 is also reliable for later years.

The economic factors used in the index provide a logical basis for determining market potentials since they represent the three basic markets served by electrical wholesalers—construction, industrial and commercial, and utility. The actual index was constructed by the multiple correlation technique which determines the weights to be assigned to each factor. The following are the economic factors and multipliers used in the index:

S & A Market	Economic Factor	Multiplier
Construction	Number of electrical contractor electricians	$9,800 per
Utility	Number of metered customers of R.E.A. and municipal utilities served by electrical distributors	$20 per
Utility	Number of metered customers of all other utilities (primarily privately owned)	$3.50 per
Industrial	Number of manufacturing-mining employees	$40 per
Commercial	B.P.I. (for miscellaneous institutional and commercial organizations)	$200 million

Computing Your Market Potential

The supplies and apparatus market potential of your territory can then be computed quite readily by using the above factors together with available local market data. A worksheet (*No. 1*) has been developed for your use and detailed instructions are given in the following paragraphs. However, before making the computations, it is necessary to define the term "market potential" and to spell out what territory, customer groups and time period are covered.

Market potential is defined simply as the total industry sales in a given time period. For instance, if one were determining the supply and apparatus market potential for Cook County, Illinois, it would be the total sales of S & A products made by electrical wholesalers in Cook County.

The territory, customer group and time period must be stated clearly in order to obtain a meaningful potential. The territory is usually defined in terms of counties; however, counties may be split if desired. The S & A wholesaler serves three basic markets: (1) electrical contractors, (2) industrial and commercial firms, and (3) electric utilities. Many wholesalers will serve all of these groups; others may specialize in

only the contractor or industrial market. If a particular group is not served, the appropriate space on the worksheet should be left blank. It may be interesting, however, to compute the potential for unserved markets.

The time period covered is usually a year, thus the worksheet is designed to cover this period. The potential is normally computed for the immediate past year. Future estimates can then be made from this base figure.

Electrical Contractor Market

The electrical contractor market segment offers the greatest single opportunity for electrical wholesalers, accounting nationally for around 57% of total market potential. The figure to be secured locally here is the number of electricians employed by electrical contractors in the territories covered. A historical figure may be obtained from *County Business Patterns,* published by the Department of Commerce; however this information will have to be updated, based on local data. The *National Electrical Benefit Fund* has current estimates on the number of union and nonunion electricians employed in various territories. You may have other local sources which can provide estimates or you may wish to make a detailed analysis by listing all of the electrical contracting firms in the area and estimating the number of men employed.

At any rate, once you have what you consider to be a reliable estimate, the figure should be entered on the form in space 1A and multiplied by the $9,800 multiplier to determine the electrical contractor market potential. The multiplier here is a national figure which will be appropriate for most sections of the country. However, if the proportion of residential construction in your area is lower than the national average, you should use a higher multiplier. Conversely, if the proportion of residential construction is higher than the national average, you should use a lower multiplier. These adjustments, if necessary, will have to be made individually for your market.

Industrial and Commercial Market

The industrial and commercial market accounts nationally for over 30% of the total supplies and apparatus market potential. Two local figures are required to compute the potential for this market segment: (1) number of manufacturing and mining employees in the area, and (2) *Sales Management* magazine's "B.P.I." (Buying Power Index).

The employee data can usually be secured from the local Chamber of Commerce or State Employment Office. *County Business Patterns,* published by the Department of Commerce, also contains manufacturing employment data. Current monthly information is shown in *Employment and Earnings* published by the Bureau of Labor Statistics. The B.P.I. for the area is listed in the annual buying power issue of *Sales Management* magazine, which is available at most public libraries.

The employment data and the B.P.I. should be en-

Worksheet 1: Determining Your Market Potential

TERRITORY COVERED _____

_____

1. **ELECTRICAL CONTRACTOR MARKET**

1A. Number of electricians employed by electrical contractors	X $9800	=	$_____

2. **INDUSTRIAL AND COMMERCIAL MARKET**

2A. Number of manufacturing and mining employees	X $ 40	= _____	
2B. Buying Power Index	X $ 200 million	= _____	
		TOTAL	$_____

3. **UTILITY MARKET**

3A. Number of meters of private utilities	X $3.50	= _____	
3B. Number of meters of REAs and municipals	X $20	= _____	
		TOTAL	$_____

4. **TOTAL MARKET** $_____

Worksheet 2: Determining Your Market Position

MARKET POSITION

	Market Potential $000	Company Sales $000	% Market Potential
1960			
1959			
1958			

COMPETITIVE ANALYSIS

	Market Potential $000	Number of Competitors	Average Sales Per Competitor
1960			
1959			
1958			

COMPETITIVE POSITION

	Average Sales Per Competitor	Company Sales	Company Sales ÷ Average Sales Per Competitor
1960			
1959			
1958			

tered in the appropriate spaces (2A and 2B) on the form and multiplied by the factors shown. The total of these two figures provides an estimate of the industrial and commercial market in the area served.

Electric Utility Market

Two sets of local data are required to compute the potential of the utility market: (1) number of customers of private utilities, (2) number of customers of REA and municipal utilities. These statistics may be secured from the utilities directly or from McGraw-Hill's *Directory of Electric Utilities*. They should be entered in the appropriate spaces on the form (3A and 3B) and multiplied by the factors shown. An estimate of the total utility market in the area served is obtained by adding the two individual estimates.

Total Market Potential

The total market potential is secured by adding the estimates for the electrical contractor, industrial and commercial, and electric utility markets. It is recognized that the potential thus obtained may have to be modified for local conditions before it can be used for business planning. This type of local adjustment cannot be considered in a statistical formula, but must be made territory by territory, based on management analysis.

Thus, the procedures outlined provide the electrical wholesaler with a framework and a base for studying his market potentials, but there is no substitute for management judgment which still must be exercised by the individual firm.

Market Potential Analysis

The most significant part of the study is the market potential analysis which can be made after the territory potentials have been computed. A market analysis worksheet (*No. 2*) is provided, and detailed instructions are as follows:

The first step in the analysis procedure is the determination of your firm's share of the market potential. This is accomplished by dividing the sales of your firm for the period shown by the estimated market potential. The computed percentage becomes particularly significant when viewed over time since it indicates whether you are gaining or losing market position.

The share of market measurement tells you how well you did in the market place, but it does not indicate how well you should have done. One means of measuring this is to compare yourself with competition. This can be done by counting the number of electrical wholesalers competing in your territory and dividing the market potential by this number. This, in effect, provides an estimate of the average sales per competitor in your territory. You should next determine the relationship of your sales to the average sales per competitor. This ratio will reveal whether your firm is smaller or larger than the average competitor.

At this point, you must exercise some individual judgment to determine how large you want to be compared with the other firms in the area. This is your objective or sales potential. Perhaps you want to be twice the size of the average competitor or you may be content to realize half the sales of the average competitor. This objective will have to be determined individually based on your personal goals and knowledge of the business. One thing is certain, however, and that is everyone can't exceed the average sales per competitor. Thus, in setting your objective, it is well to be optimistic, but you should also be realistic.

A final point is that the determination and analysis of market potential should not be a one-time activity, but rather should be done on a scheduled basis at least once each year. If you believe that these market measurements are interesting when you view them for the first time, you will find that they are more significant when analyzed regularly over the years.

Where To Find the Economic Data

Here is where you may obtain the reference sources mentioned in this article:

County Business Patterns is a series of soft-cover books that may be ordered from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., or any of the Department of Commerce field offices. These books, which report units, employment and taxable payrolls by industry groups for the first quarter of 1956 (the latest period for which this information has been tabulated) are organized geographically. Volumes and prices are as follows: Part 1—United States Summary ($1.50), Part 2—New England States ($1.00), Part 3—Middle Atlantic States ($1.50), Part 4—East North Central States ($2.50), Part 5—West North Central States ($2.25), Part 6—South Atlantic States ($2.25), Part 7—East South Central States ($1.50), Part 8—West South Central States ($1.75), Part 9—Mountain States ($1.25), Part 10—Pacific States ($1.00), Part 11—Outlying Areas ($.50).

National Electrical Benefit Fund is administered by a board consisting of members of the National Electrical Contractors Association and the International Brotherhood of Electrical Workers. While it may be difficult to obtain estimates on employed electricians in all areas, it is suggested that inquiries be addressed to National Electrical Contractors Association, 610 Ring Building, 1200 18th St., Washington 6, D.C., or to the NECA Chapter in your trading area.

Sales Management's "Survey of Buying Power" issue (latest: July 10, 1960) is probably available at your local library. If not, a copy (price: $5.00) may be obtained from Sales Management, 630 Third Avenue, New York 17, N. Y.

Employment and Earnings, a monthly publication of the United States Department of Labor, may be obtained from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Prices: 45 cents a copy or $3.50 for a year's subscription.

Directory of Electric Utilities lists names, addresses, personnel, equipment and characteristics, number of customers, etc., for private and public electric light and power utilities. Available at $40 a copy from Directory of Electric Utilities, McGraw-Hill Publishing Co., 330 W. 42nd St., New York 36, N. Y.

MARKET PLANNING GUIDEBOOK

How to Organize Your Sales Force For the Most Efficient Coverage

THE ONE BASIC GOAL of management in organizing for most efficient coverage is to help its spearhead—the salesman—make the best possible use of his time to attain a fair share of volume at a fair profit.

Obviously he can't get all the business—and shouldn't try. But management—by applying the appropriate factors and multipliers (*page 86*)—can give the salesman an idea of broad potential, and then help set reasonable sales goals based on this and many other local factors, such as customer size, future promise, travel load, credit situation, etc.

Profile Your Present Coverage

Before the electrical distributor can plan to obtain a better share of his market potential through more effective coverage, he must first know where he stands with his present operation.

He can use a relatively simple system, such as was employed by Dauphin Electrical Supplies, Inc. (*page 117*) to highlight some basic problems. But, assuming the distributor already knows this number of accounts, prospects and towns covered, further refinements can be made to broaden his profile of present coverage.

Let's say we take all your present customers—without regard to type—break them down into actual dollar sales ranges, listing the number of accounts in each category, as well as the average calls per year now being made on each group.

Dollar ranges can be set up as follows:

Range	*Yearly Gross Dollar Sales*
A	More than $100,000
B	25 to 100,000
C	5 to 25,000
D	1 to 5,000
E	Under 1,000

You can derive the number of accounts in each class and, working with the salesmen and/or their call reports, can develop a call frequency chart such as this (all figures are hypothetical):

Range	*No. of Accounts*	*Average Calls Per Year*	*Total Calls Per Year*
A	5	20	100
B	21	13	273
C	110	8	880
D	130	4	520
E	200	2	400
	466		2,173

The total calls per year figure for each group—in the last column—results from multiplying the number of accounts in each range by the average calls per year for each account in the group. The hypothetical total indicates that it takes 2,173 calls per year to presently service 466 accounts. Try this plotting with your own firm's figures for the past three years.

- **Spotlights Misdirected Effort**—This simple analysis may uncover some interesting—and disturbing—facts. You are almost certain to find, for example, that as a customer grows larger, the number of sales calls does not grow in direct proportion to the increase in dollar sales.

This might be good—because you cut coverage costs, or bad—because the account may not be adequately served and may still hold an untapped potential.

In terms of call concentration, you may find that salesmen are spending more time with a relatively unprofitable segment of your total customer group, thus providing a valuable key to your later considerations of customer potential.

By dividing your present outside sales force into the total number of calls made yearly to service your present accounts, you get the hypothetical average number of calls each salesman can handle per year. This is purely from a work-load angle, without regard to size of account, travel and other considerations.

- **Other Influences**—Difference in call capacity between rural and urban areas can be applied at this point. Undoubtedly, the heaviest concentration of calls will be found in the metropolitan areas you serve. Perhaps the number of accounts the city salesman now serves will be too heavy for efficiency when judged in light of the hypothetical average that can be handled efficiently by one man.

Variations in customer types must also be considered. If the salesman specializes in industrials, for example, this is no problem, except on the basis of size differentials. But if the salesman also serves contractors, utilities and even dealers as well, logical estimated travel and call-time weighting must be introduced into the work-load planning.

Projecting Present Potential

Before considering potential—among present accounts and prospects—the word must be defined. To one management executive it may mean next year; to another it may mean ten years hence. To the salesman, it might represent next month. Your territory, your customers, your growth goals and other factors will determine what potential should mean for you. But

let's arbitrarily select three years from now as the time element in gaging your potential.

• **Get Salesmen into the Act**—Statistically, and perhaps personally, you know your accounts pretty well. But the salesman who calls on them weekly or monthly can certainly add significant detail.

Working with the sales force on the basis of the five dollar-volume ranges previously used, management can project potential on present accounts. For example, if management and the salesman agree that an account now in range C ($5,000-25,000) can be brought up to range B ($25,000-100,000) within three years, an analysis of each account—based on established knowledge and further customer investigation—will give a complete projection of dollar potential to shoot at in that time period.

The projected findings may not all be optimistic, but a management-salesman review and forecast will quickly point up the "questionables"—the customers whose promise is dimming.

What's more, in conducting the evaluation and projection, you may want to add a sixth range—equal to $0 sales per year. Who would fall in this class? Accounts who probably should not be on your books right now and who definitely will not be there three years from now, unless you are so friendly you want to go out of business together.

If you examine those in this F (for "failure") potential range you will find:

• **Slow paying customers**—the chronic "90-day wonders" who go out in a blaze of requests for terms based on 120 days, "just until we nail down that big school job."

• **Demanding customers** who want special rush deliveries, tricky expediting and "special" price quotations—all far beyond a fair sales return for you.

• **Distant accounts** who play on your service strings like violin virtuosos while placing the bulk of their profitable orders with distributors in their trading areas.

• **Customers who make a science out of returning** unusually large amounts of material for credit.

• **Accounts who buy only low profit items** from you without any promise beyond that.

These are the accounts that must be sorted, weighed and—in most cases—cut off, since they show no potential other than cutting into your valuable time and your salesmen's efforts.

Once this has been done, your salesmen should be able to increase their coverage of more profitable customers while also concentrating on more profitable products. Everyone else in the organization will be in a better position to help make your market potential a reality.

True, there will be a reduction in gross volume. But chances are that your inventory needs will be cut, your overhead reduced and both your gross and net profit rates will rise. Thus, you start developing your market potential from a healthier operating base.

Survey Your Potential

The kind of customers you want to serve has become clearer, but more information about their buying possibilities—especially product-wise—is needed.

To round out present account potential, forms can be developed (*page 102*) which will help salesmen determine detailed product line dollar potential, how you stand among your competitors and why, how accounts rate distributor services, how they use what you sell and what your contact saturation amounts to.

• **Plan Potential Cultivation**—With the knowledge you now have about your present accounts and their promise, changes in sales coverage can be made. This re-direction will be influenced by many local considerations, but there are some basic rules of designing territories that can always be applied.

There may be some accounts—a notch or two above the "unprofitables" of the F range, which might better be served without cutting into your salesmen's valuable time. They can be made house accounts—until they prove out as better potential customers. Salesmen then will have more time for really profitable accounts and an opportunity to more than offset loss of the customer.

They will not only know who to sell, but what to sell and how to sell—as a result of your joint surveys and analysis of the high potential accounts.

This also can help you to develop programs around product specialties and guide sales training of product specialists—particularly if the products are fairly high profit items. There's no incentive like money.

Gearing Sales For More Potential

As a result of all this do-it-yourself market research, you should be ready to think about reorganiz-

CONTINUED

Management—Sales Teamwork Means Success

ing internally and outside to cultivate present customer potential and to tap new territories and new accounts in a systematically planned and profitable manner.

• **Specialists**—Does your research indicate the need for market, product or engineering specialists? If utilities, for example, look promising presently and in the future, hiring a specialist or assigning one of your own salesmen to this market may be a logical move. But it must also be economically feasible.

Suppose you find that one or more products amount to a specialty with your firm, and their potential with as yet unreached accounts looks good. This sort of situation has proven the key to profitable business for many a distributor smart enough to capitalize on it by becoming "headquarters" for the product—with an expert salesman exploiting it.

If you've ever been lost in the shuffle because you couldn't get manufacturers' technical help when you really needed it to clinch a sale, it might be time to decide just how badly you want certain kinds of industrial business. If your market analysis tells you that your firm belongs in the "big stuff" business and ought to go out after more, the cost of hiring a college-trained engineer to support your salesmen may be easily justified as an investment rather than a straight addition to overhead. This will take some basic training on your part to make sure the sales engineer is thoroughly familiar with your entire distributor operation and the sales and service philosophy behind it. You want a real asset to your other salesmen, not the "best engineering argument winner" in your trading area.

• **Compensation**—Another result of your market potential studies may suggest you review your current sales remuneration with an eye to making present and potential market cultivation more effective.

The days of the strictly straight commission salesmen are gradually fading, though roughly 20 to 25% of our industry's sales compensation is still computed on that basis.

The most prevalent method is a draw, car allowance and commission based on the gross profit on business the salesman gets, with other sales expenses taken care of in a number of ways. This system works well—provided the customer potential is adequate to begin with and there is ample evidence of really profitable return.

With this method, the gross profit often must vary between city salesmen and country salesmen, due to metropolitan customers' concentration, travel differences and other geographic factors.

Here's how one electrical distributor has worked this out. A city salesman must produce—at between 14 and 16% gross margin—a minimum of $250,000 a year to pay his way, if he is paid on a 16 to 18% of gross profit on sales. This would be $40,000 gross profit at 16% and would provide the salesman with an income of $6,800 per year at 17% of gross profit.

For a territory salesman, this same $250,000 worth of business at 16% would still mean $40,000 gross profit, but at 27%—which is what the distributor pays country salesmen—this would mean an income of $10,800 a year.

These are minimums, and if the salesman has to pay traveling expenses out of these figures, he isn't left with too much. So, in figuring out compensation relative to building your share of potential business, a sensible base has to be used if percentage of gross profit is to be applied.

This method usually works well with established territories, but what about new potential uncovered by your survey in new areas?

• **Territory Coverage**—There's nothing startling about the trend to setting up branches, but surprises have come from operating results—and with them, valuable lessons.

Time was, when you thought there was enough business in a newly developing area, you just set up a minimum warehouse operation with your territory salesman in charge and one or two inside people to run things.

Too often, this was the distributor's seemingly simple answer to "How far can you economically send a salesman from the home office or warehouse he works out of?" But also too often, it wasn't the answer at all.

The salesman would find himself competing with tied hands. He had to sell against salesmen from full-stocked, full-service local distributing houses while he had to rely on distant main house servicing, billing, delivery and decisions. Result: too much time spent in trying to meet competition and too little time used for making it and developing potential. Further result: distributors pulled in their horns and shut down small branches, or invested more heavily to make them self-sustaining "independent" branches.

The lesson here is obvious. Before laying out a time, money and personnel investment in a branch operation—study the real worth of the idea. Ponder not only the potential of the new territory, but also the competitive pitfalls.

They should show up much more clearly as a result of your market potential investigation, your salesmen's surveys and your own experienced considerations based on what you would do if a distant competitor opened a branch in your home trading area.

In appraising new territory, you might try this comparatively economical approach now being used by one distributor. In looking for new business, this distributor sends a new salesman into the area on a fixed salary. The salesman is told who to call on, what to talk up and what management wants to know.

Each day, the salesman makes out a written, fully detailed report on his calls and their outcome. If the accounts that this new man calls on develop into buying customers (it usually takes 6 to 10 months to determine this), he is given a bonus on these new

accounts if their monthly purchases exceed $500. By employing this technique, investment is minimized, yet the face-to-face contact and results bring the maximum of information into new area analysis.

• **Inside Support**—Any plan you develop to capture a greater share of your market potential will be substantially more effective in practice with the full cooperation of your inside personnel—particularly counter and telephone salesmen.

They must be geared for two developments; more intensive cultivation of existing key potential accounts by the outside salesmen, and new contacts with new customers who show great promise.

Coordination with outside efforts is essential. If, for example, a salesman's survey of a key account's plant opens the door to introduction of a new group of products, the inside salesman should be alerted and both should sharpen up their knowledge of the product or line and its pricing before the push to sell it.

Preparedness at the counter also helps. A few inquiries to a pick-up customer can often furnish a valuable lead to new business for an outside salesman, as well as helping toward related item sales.

• **Helpful Incentives**—Since the ultimate purpose of your potential development plan is to obtain a larger share of profitable business, one of the first steps will be getting the story across to inside and outside sales personnel.

This will be a long range problem. A sales growth plan without sales motivation is just a plan. How, then, do you get the message into the minds of your sales force and keep it there for months and even years ahead?

Quota systems are effective as far as they go. But how far do they go? Far enough to carry your potential program to the goals you want to reach? Probably not. What's needed here is a technique more dramatic.

Sales contests—well organized, well run and based on realistic incentives—can be the answer. The secret to conducting successful contests in a distributor organization lies in paying constant attention to details and in skillfully using showmanship in all contest matters starting with the first announcement.

To run an effective sales contest, you need these four basic steps:

1) Selection of the goals (with any of the supporting facts and figures you and your salesmen have gathered on your home-made research to show the attainability of the contest's objectives).

2) Selection of the prizes (their value should serve to underscore the importance of the plan and ought to convince salesmen that anything worth having is well worth selling hard for).

3) Mapping out of a running publicity campaign within the organization to sustain interest (no, you don't have to publish a magazine unless you already have a house organ—a simple mimeo or ditto bulletin will do the job equally well).

4) Awarding of the prizes (keeping in mind that the value is only half the fun of winning—it's the attention and the spotlight, the recognition of being a "whale of a salesman" that the winner really enjoys when he collects his tangible reward).

There are potential pitfalls to any sales contest, but good planning and constant attention will help you steer clear of these hazards. A few ground rules:

• **Avoid any misunderstanding** within the organization of the contest's purpose.

• **Keep precise records** to eliminate internal friction.

• **Don't have one ecstatic winner,** but dozens of disgruntled losers.

• **Sidestep sales slump** at the end of the contest by stepping up the beat with publicity that will stimulate stagnating salesmen into carrying over their pressure-born efforts.

• **Don't leave the ladies in the lurch.** A little pressure at home for attractive prizes never hurt any salesman's chances and may have made some winners win.

• **Advertising and Direct Mail**—As a concrete result of your account analyses and the in-plant surveys conducted by your salesmen, you will have information on which to build a promotion effort.

For one thing, you should know what product possibilities exist, what you can sell—profitably. For another—and equally important—you will have a good idea of your image among your customers. These are two pegs on which to hang your advertising and direct mail programs.

The media you employ for advertising is important. If you know, for example, that the majority of your salesmen's contacts are industrial purchasing agents, local purchasing publications are a natural—particularly for reputation-building ads. Contracting publications can be used similarly. Your own house organ or weekly or monthly bulletin can be equally effective.

You may want to combine prestige advertising with a product campaign. This has been done successfully with products such as lighting. Case in point: suppose you wanted to make industrials conscious of the benefits of good lighting. You might organize a meeting, including your sales force, local industrial buyers and industrial contractors and experts in industrial lighting drawn from the executive ranks of some of your manufacturer-suppliers to explain lighting benefits.

Your next step: coverage of the meeting by local publications, including newspapers. You would also place full page advertising and with the cooperation of the purchasing publication, order reprints which can then be sent out with your ad included to your present and prospective accounts complete with your advertising message. Charge and addressograph plates come in handy for this and direct mail too. Your mailing lists will probably have been reorganized and expanded after account analyses, so your message gets to more of the right kind of customers—whether it sells you or your products. Incidentally, if you come up with a sound promotion plan, you will find manufacturers more than cooperative in helping you get a healthier share of your market potential.

• **Teamwork Is Essential**—In every facet of your program for developing more profitable potential, real coordination and cooperation will be vital.

In launching your plan, you will discover that you can't just hand it to your sales personnel and sit back. Field calls by management—particularly sales managers—will help immeasurably in reassuring salesmen and their accounts that yours is a distributing firm that cares, that yours is a program designed to **work** for more profitable business.

How To Maximize Your Sales

THIS SECTION is not a canned selling course. It is not concerned with the ABC's of selling. Its purpose is to aid you, the distributor's salesman, in evaluating the industrial, contractor and utility markets you sell, and thereby do a better selling job.

Its design is to pinpoint ideas for you in two areas: (1) finding hidden potentials in your present accounts and (2) discovering the potentials in prospective accounts.

Each section contains salesman-attested "how-to" ideas that are applicable to specific markets, but you will probably find that some of them are flexible enough for use in all three markets—industrial, contractor and utility. These ideas are not axioms or rules that will insure an immediate increase in your sales. Whether they work or not depends on how you interpret them and put them to use—when you're visiting an industrial plant, when you're calling on the electrical contractor, or when you're selling-up utility linemen.

. . . In the INDUSTRIAL Market

ONE ROAD many wholesalers' salesmen take leads to the industrial account. Ideally, the salesman who calls on the industrial: (1) knows the applications of his products better then the customers' technicians; (2) knows practically every use and limitation of the lines he sells; (3) is able to spot wastes and weaknesses in customer-practices and can diplomatically eliminate them with practical solutions via products he sells.

This is the picture of an ideal distributor salesman. He's familiar with customer operations, processes, practices and problems. He knows his products, sales territory and markets. He organizes his work and makes waiting time pay-off. He's a credit to himself and his firm, a boon to his customers and—he makes a good living.

How about you? Want to make the most of your industrial sales territory? Below and on the following pages are some tried and proven sales ideas, culled from experiences of successful distributor salesmen who make industrials their bread and butter.

Some of the ideas presented may seem basic, but it will pay you to step outside the day-to-day selling activities that you may be too close to and take a long, objective look at the mechanics of effective industrial selling. A review of these ideas can help you uncover the missing links to building bigger and more profitable sales.

Cultivating Contacts

Even though more sales effort may be directed at engineers, electricians, or members of design departments, the salesman calling on the industrial obviously should avoid bypassing the purchasing agent. Though many such buyers purchase hundreds of items unrelated to the electrical field, good p.a.s are often anxious to learn more about it and like to see electrical product literature and samples. Here are some good points you can use to take advantage of the buyer's curiosity and willingness to learn, of his respect for the salesman who knows his products and of his appreciation of the salesman who can make the buyer's job easier:

- Some purchasing agents like to feel, take apart, and show new products to others for opinions. Often, when a salesman introduces a new product to the buyer, he is requested to give a demonstration to plant engineers and electricians. This could mean entrance into a salesman's potential gold mine—the production area of the plant.
- Management often holds an open house for its customers to inspect the facilities of your firm. If it's convenient, and you're confronting a new customer who has never been inside your warehouse, invite him to come with you and make an inspection of your firm's facilities, personnel and stock.
- Your buyer-contact may be telephoned from time to time by an inside salesman at your firm. Why not arrange a luncheon date so that you, the purchasing agent and the inside salesman can get together? It's not only an ideal way for a buyer to meet the voice he's been dealing with, it's also a good "cementer" of relations.
- On "cold" calls, make it a policy to request permission to speak to the maintenance man. While you are requesting this of the buyer, tell him your reason is to make his job easier by creating a better maintenance program.
- Be creative. Avoid being labeled an order taker. Buyers have made some cutting remarks about "the order takers." The salesman can best sell himself and make contact with the buyer only if he can show good product knowledge and application sense, and can be trusted to suggest purchases out of need—not merely for the sake of making a sale.
- **On The Inside**—Opportunities in the plant can be unlimited to the salesman who breaks the buyers' barrier. But before these opportunities can jell, more contact cultivation is necessary. Once the doors of the plant open up to you for the first time, it's a good idea to forget about snaring the order temporarily. Concentrate on making yourself more valuable to the people on the inside.

One way to reach this goal is to visit the plant foreman or superintendent—not necessarily to make a sale

To Present and New Accounts

—but to find out what type of industrial electrical supplies the plant uses and needs. Plant personnel like this approach because they are not being pressured into buying products they don't need. The pay-off on this method is that you have a helpful list of what supplies the plant uses. The list the superintendent gives you may not be all they need—your eyes and ears should pinpoint others as you tour the plant.

Some more personal cultivation rules salesmen have used on the "inside" are:

- Spreading new product and maintenance trend information.
- Rubber-stamping all product literature with personalized rubber stamps that carry the name of the salesman and his firm. Literature is then left within the plant and with the purchasing agent.
- Making occasional "confidence" calls with no sale in mind. They are important for maintaining customer confidence in the salesman. The "sell'em-and vanish" order-takers look with chagrin on this idea.
- Knowing who specifies, who directs purchases and who influences buying policy. Don't make the mistake of just cultivating the man who signs the purchase order. Salesmen have stated that their sales really started to climb when they sought out those whose indirect influence meant just as much.
- **Questions**—There are a number of questions a salesman should ask himself each month to make sure that he isn't losing verve in serving his industrial customer. The luster of the new account and your eagerness to impress may wear off quickly, and when this happens you need check points to keep on a steady selling course. Ask yourself the following questions:

1. Have I checked "out back" to see if service is smooth? **2.** Are invoices neat and correct? **3.** Do I know their needs, answer their questions fast, handle complaints adequately? **4.** Do I offer cost-cutting advice and suggestions on new products? **5.** Do I tell them about price changes right away? **6.** Do I have a purpose for going to the account?

- **Don't Forget**—Cultivate the receptionists. They are important people to you. They can give you the names of who buys what and where he is located. They can speed your time in the lobby and can tell you who the new people are in the plant—the people you should get to know. In smaller plants, they can even steer an order your way with a telephone call to the purchasing agent.

Don't forget to keep your eyes and ears open for a switch in personnel. When purchasing agents change, it can present a problem. Try to find out about this type of change as soon in advance as possible. When you do, the sooner you talk to the p.a.-to-be (he may be someone you regularly contact inside the plant) or the new p.a., the better your chances will be.

What's The Potential?

Maybe you think you're cruising on all eight in your sales to industrial accounts. But have you ever

To Sell: Learn, Cultivate,

asked yourself—even of your best account—how much business is the customer good for today? What will he be buying tomorrow? These are the two key questions about any industrial.

Sometimes management provides forms which help you to assess your accounts. Such forms seek information that only the salesman, acting as an observer, can gather. But these forms are only guides. (See page 102.) The real answers come from the salesman's talent in using and in acting on the information.

In any analysis of an industrial account's potential, the distributor salesman should:

Check: Observable elements such as the appearance of a plant, location, quality of equipment and fixtures. Look for changes taking place in the neighborhood or market—even the atmosphere (one plant might be dull and minus personality, another will be crisp and alive) bears watching.

Check: Available data such as annual total volume figure; growth possibilities (this can be determined from your own progress reports); total amount of products which the customer buys from you and your competitors and the number of employees—has the amount risen, fallen, or remained static? Why?

Check: The following departments in the plant you call on for possible product sales in maintenance, replacement or need for new application: (see page 104 for detailed survey form) engineering dept., laboratory, maintenance dept., model shop, storage area, machine shop, shipping, receiving, assembly, fabricating, paint spray, boiler room, tool room, inspection area, plating, stock room and general office areas.

• **Analysis**—The purpose of such an analysis is to accumulate information on the electrical needs and requirements of an industrial plant. It probably will not be necessary to talk with more than one person in the plant to get the information. As mentioned previously in the section on cultivating contacts, the plant superintendent or a similar official can help you out on this score. This analysis can be kept in your file as a permanent record, subject to change, and as a basis for your next sales step—the presentation of specific equipment that will solve your customer's problems.

On the basis of your analysis you should have a good idea of what equipment types the industrial plant is most likely to need. No doubt, a number of your suppliers have produced presentation material in the form of letters, product sheets and detailed technical literature to aid you in getting across your ideas.

• **Research Aids**—Other materials that the salesman can use to determine the account potential are:

• **Progress report sheets**—This is to keep a running record of every customer as to the products you have presented, proposed, sold and delivered.

• **Sketch sheets**—Buy graph paper and use it to rough-out the plant area, pinpointing spots for electrical equipment needs already given to you by the plant superintendent. This way you can see at a glance, where and how much material is required. The layouts can also be used as a guide for preparation of a new equipment proposal.

• **Modernization Market**—In any industrial plant that the salesman normally serves, there are two, almost fool-proof, methods of uncovering modernization sales potential. Both sources may be overlooked by the distributor salesman who is not actively seeking this business. The first one is the regular order mailed in, phoned or given to the salesman by the industrial. By watching the orders for electrical maintenance supplies, the salesman can detect when the plant is ordering for old or inefficient equipment. Frequently, he may find that an industrial is ordering from old catalogs, indicating that it has a definite need for modernization, and also a need for education to give the industrial's personnel the information that will also up-date their thinking.

The second—and most productive—source of determining an account's potential for modernization material is the salesman's own eyes and ears. His method of observation, however, must be organized and motivated because the salesman can become so obsorbed in the major purpose of his visit that he forgets to look for evidence of obsolete equipment. The more familiar the salesman is with the plant, the harder he must condition himself to sleuthing for modernization needs. Why? Because he has become accustomed, like the industrial account itself, to the prevailing conditions.

Organizing Your Work

The techniques described so far involve much of the one thing that the salesman should place a high price on. That's time. The distributor salesman never seems to have enough of it. Therefore, to put these ideas to work, proper work planning is a must.

• **List Accounts**—List all accounts in your assigned area, grade them in terms of volume and allocate your time in terms of the number of calls per month or quarter. After a while you may change the plan in search of maximum results, but your effort will be orderly and directed towards specific objectives.

• **Work Plan**—From the master account listing plan mentioned above, make up a weekly work plan that will help you think before you call on an account. On this sheet, note the following: the proposed calls to be made and the subjects to be covered; the actual calls that were made and what subjects were actually covered. This information will help you fill out the next week's work plan and permit you to check against the long-range objective. It sounds like a lot of paper work, but just an hour or two a week will take care of it. One more thing: it will work for you.

• **How One Salesman Does It**—To maintain a constant record of the number of calls and sales made to an industrial customer, one distributor salesman keeps a file of all important information to which he can refer for past call data and plan for future sales.

The file is carried with him at all times and has

Create

two parts. On the front of each card—one for each customer—the name of the company is listed, plus the address and names of people to see for orders. In addition, the type of industrial is also indicated. Here are the other highlights: (1) each time a call is made, the date is listed in code. Social calls are designated "S"; if deliveries are made, "D" is placed after call date. Orders received are also noted. (2) Another column is for product information and literature handed out; check marks indicate quantity dispensed.

What's the advantage of the system? It gives a graphic call-by-call breakdown of all transactions; it tells how much and what type of products to stress in the future. The salesman can also determine whether or not his calls are too often or too infrequent for each customer. He can tell if an account is profitable enough to retain. The entire file—and this is a good example of economizing on time—can be kept up-to-date while you are waiting to see a customer.

Earning The Order

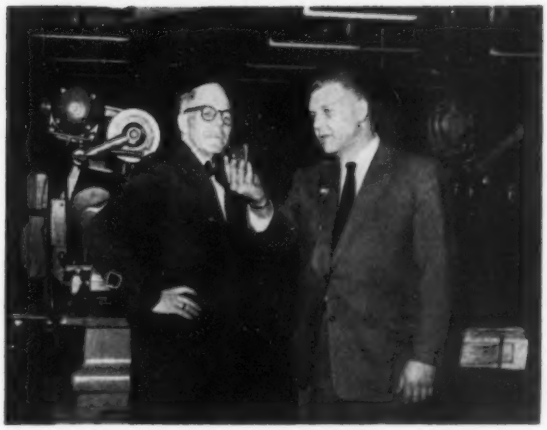
How old-fashioned is "old-fashioned selling" if it's creative and it makes good money? How wrong is order-taking if many purchasing agents condemn it? Any profitable selling done to industrials these days has to be creative. Competition is tough. Business is struggling with changes, and some industries are not in the best of health. When times are good, salesmen get their share of their company's markets, and even the order-takers fare well. When times are bad, salesmen must go out and create sales.

Whether you're selling industrials, contractors or utilities, you have to (1) learn, (2) cultivate, (3) create —that's old-fashioned selling. Putting it another way, it's called "earning the order."

• **Selling Standardization**—One of the key sources of sales that come from estimating your account's potential is the growth factor. Is the plant going to expand in the near future? If it is, you have an excellent opportunity to sell standardization.

As stated before, hidden potentials can be found through the maintenance and engineering depts., plant supers and electricians, once contact is made with the buyer. When you gain access to the inside, bear down heavily on selling quality (after you've uncovered their requirements), minimizing price. Your big goal is to get the product specified and standardized. It's not easy and might take a long time, but it's worth the effort. If you do succeed in standardizing on products your industrial account uses and the plant does expand—you may have bigger orders coming your way.

Another smart thing to do is to keep copies of all orders and past invoices, so you know what your key industrial accounts have purchased from you. Records of original installations enable you to speed up new layouts and quotations. If you succeed in standardizing on products your firm handles, your position is that much stronger when records are kept.



ONCE inside the plant, your opportunities are unlimited.

• **Selling New Products**—Before you attempt to push a new product, get to know the customer. According to many salesmen, you should never attempt to sell a product unless there is a need for it. When there is a need, bring the item to the attention of the p.a. and the engineers. Bring literature, too, but visual demonstration is best. You must know everything there is to know about a product before you attempt to push it.

• **Selling Maintenance**—Before attempting to sell a new industrial account, one distributor says he asks two questions of the purchasing agent (or even the switchboard operator):

- Do you employ your own maintenance staff?
- Do you make something that uses an electrical item? (OEM: see below)

If the answer is no to the first and second, the account is dropped from the list of potential customers. But first, if the account does not employ its own maintenance staff, the salesman attempts to learn who does their maintenance. If it is a contractor, then he makes a call on him. In the course of the call, the salesman may discover that the contractor does the maintenance for many such industrial plants. If you sell the contractor on your service and lines, you've got yourself a nice piece of business.

If the answer is yes to the first question, the salesman shows the buyer something that is simple and universal in it's application, but something that is unique. This can range from tape to power tools. If you have something unusual and useful to show, you have something over your competitor.

• **Selling OEMs**—If the answer to the question, "does this plant make a product which uses an electrical item," is yes, the salesman uses his second sales call to introduce a package of lines that are related to each other and which could serve as components in the prospect's products. It's "the liver and bacon" or tie-in technique that is used to cover all his firm's lines. No matter where the customer's point of conversational embarkation starts, the salesman has a product to meet the customer's component needs—plus other products to follow. Each item suggests another of a related nature.

Equipment that is sold to the OEM market can

CONTINUED

Main Goal: Satisfy Customer

be almost anything—from motors to fuses. Enough back-up stock has to be carried by your firm to help your OEM account in time of emergency.

The best time to start selling an OEM is when they're starting out so you can grow with them. You have to battle competition constantly and keep up with the customer's changes and modifications. His most critical period is when he's bringing out a new model.

• **Selling Modernization**—To sell modernization the salesman will have to form a different approach to each individual customer. Past relations with the account help, but in most cases you have to do two things:

• **Condition the purchasing agent:** most buyers will rely on the production engineer or foreman to decide on modernization changes such as equipment to speed production. Your presentation must be good enough so that he will want the engineer or production foreman to hear your story.

• **Educate the maintenance man:** special sales work is necessary when you are permitted to directly visit the maintenance department. Maintenance men don't like to have anyone telling them that what they are doing is not right or out-of-date. You will have to overcome his complacency without him knowing it. The best way to do it is to implant modernization ideas in his head—ones that *he* will come up with later. Ask him where a product could be used in his shop. This puts the onus of finding the application on him. When he's through explaining where a product can be used, he may think making use of the product is his idea and will convince the purchasing agent he should buy it. Another method of education is leaving samples for him to use.

The main goal of selling is to satisfy your customer. Supplying materials isn't the only thing. Follow-up work is important. You want repeat business. Accomplish this by working closely with the man on the job after the sale is made.

How To Maximize Your Sales . . . In the CONTRACTOR Market

THE GREATEST opportunity for the distributor salesman lies in the electrical contractor market. Nationally, it represents approximately 57% of the industry's apparatus and supplies sales potential.

What's the sales potential of each electrical contractor you call on? Here's a rule of thumb that is more applicable to area studies, but can give you a rough dollars-and-cents profile of each of your contractor accounts.

1. Find out the average number of electricians employed by your contractor customer during the year.

2. Multiply the average number of electricians employed by $9,800. For circumstances which require changing this multiplier, see page 87.

3. The product of this simple multiplication step should give you a crude but usable potential for that account in dollars of apparatus and supplies sales for a year.

4. The next step is to subtract your total sales to the account from this potential. **The difference represents the business you are not getting.**

Finding Sales Potential

Whatever your share is, there is a methodical way in which you can organize your efforts to get a bigger slice. When the wholesaler's salesman calls on the electrical contractor, he can dig up more business and, at the same time, ascertain the account's potential for more sales in specific product areas by following these steps:

• Determine what the customer does buy from you. For example, he may purchase 20 different types of electrical products. These can be itemized by going over past orders.

• Determine what else your company stocks that you can sell to this particular contractor.

• Determine **what** the customer buys from other sources. Find out **where** he gets this material and **why** he's not buying it from you. (You sell the customer everything but wire. You know he has to use wire. Where does he get it and why?) There are several possible reasons, taking into consideration that you are already selling him some equipment. The most important are:

1. He doesn't like your prices on some items;
2. He doesn't like some of your lines;
3. You don't have what he wants in stock.

• **Carry Your Catalog**—While you're calling on

each contractor account, do the basic thing—bring your catalog. It can be invaluable in helping you with this "survey."

If your firm has its own catalog, slip a piece of paper before each section or before products you want to discuss. When you are going over what the contractor buys from you and other sources in various product groups, all you have to do is open your catalog to each section and go over that section with the customer, jotting down information pertinent to each product or group of products.

• **New Target Areas**—Once your survey has been launched, start with your key accounts first, then investigate the smaller accounts that have been doing little or no buying. The information gathered will not only give you new target areas for selling, it will also provide management with a sharp, hard-fact profile of your contractor accounts that can be taken apart and analyzed.

Your survey may even prompt management to cast a fresh look at what the house stocks. New lines may be added and old ones dropped.

• **Price Problem**—During the course of your survey, it's almost a sure bet that you will discover (if you don't already know) some of your contractor accounts are not buying all they could from you because of price. This is a problem you have to lick on your own.

Many salesmen today lack the savvy to handle the price bugaboo, which may seem insurmountable on bid business. To some, price can become the only factor in a sale. So they fight fire with fire. They meet the price problem with price.

It's true that price is at the forefront of every negotiation, but there is a way that the distributor salesman can hope to overcome it if he takes the right slant on the problem. Here are a set of rules that a number of successful salesmen have used to guide their thinking and sales action:

• **Plan** for the price discussion in advance. It's a natural part of every sale and should be welcomed as a sign of interest in what you're selling.

• **Quote** price boldly and believe in the prices of the products you sell. If you skirt around the issue the customer may be moved to get out the chisel.

• **Review** lost sales for the past six months. How many were lost because of price? How many for other reasons?

• **Know** your products thoroughly. Let some of your customers resell you on some of the benefits they have received from them.

• **Stress** value to the customer rather than price. The dollar price of something changes with every salesman who walks into the contractor's office. Value price grows in the buyer's mind. As value price grows, dollar price can fade from view.

• **Highlight** your company's service, and work in the customer's interest, not your own. Put yourself in his shoes, anticipate his needs and know his problems.

• **Use Diplomacy**—Before attempting to survey any electrical contractor accounts, it's very important that you make arrangements in advance.

Call up the accounts you intend to visit and tell them you are organizing your territory for better service. Ask them if it is agreeable and convenient for them to sit down with you on such-and-such a date for 15 or 20 minutes. Let them know you want to go over and solve any problems they may have. Emphasize that your function is service.

When you are in the office of your first survey-customer, come fully equipped with catalog, pencil, paper, diplomacy and a friendly manner. You'll be needing the contractor's full cooperation.

After the Survey—Sell!

After you've completed the survey of your accounts, you'll have a selling goal to aim at. Before reaching that goal, let's review what you need to get rolling. The distributor salesman calling on the contractor account should be armed with the following:

• **Knowledge** of his products. Knowledge of the customer's needs, tools, language and problems.

• **Ability** and desire to follow-through and give service by occasionally helping the contractor with paper work; straightening out adjustments; giving emergency delivery when needed; keeping him informed of credit standing.

• **Personal interest** in the contractor customer. Carry samples, new items, product literature on each call. Also on the list: price sheets and catalogs.

• **Order Makers**—In the contractor market, there is no customer who cannot be influenced in some way by a foreman, journeyman electrician or an estimator.

The distributor salesman can cultivate the foreman and electricians by introducing time-saving ideas that will help them to do a better job. He can do this by going to the job site with product samples such as power tools or small generators. The contractor should be asked before you do this, because some may object to the idea. An excellent opportunity for this type of sale can come from performing a service, such as an emergency delivery of a previous order, to the job site.

You can also influence the electrician or foreman by asking the countermen at your firm to demonstrate new applications when the customers come in to pick up supplies.

The contractor's estimator may also be open to suggestions from the distributor's salesman. The estimator is responsible for estimating installation costs of electrical systems involving current prices of materials and application of labor units to include installation costs. Show him catalogs, samples, new products and literature. Before working with him, let the contractor know about it. Many times you'll wind-up working with both the estimator and the contractor together (sometimes the contractor and estimator are the same person).

No matter whom you're talking to—electrician, foreman, estimator, contractor—always strive to keep your customers up on product changes and improvements. You can do this by stressing new products and new applications, by informing them of any industry activities taking place at your local utility or electric league, and by inviting them to product education meetings and shows held at your own firm.

• **Will the Contractor Sell?**—Too many salesmen are not helping the contractor sell his product and services, even when the contractor approaches the individual salesman on this score.

What's the basis for this problem? The contractor

CONTINUED

Help the Contractor to Sell

will seldom take the initiative to sell-up by himself. The best way for the salesman to overcome this and help himself in the long run is to make sure that the contractor is educated in sound principles of promotion, merchandising and salesmanship. Who can do this better than another salesman?

It stands to reason that if the contractor is able to sell himself successfully—and he has you to thank for his new-found acumen—you're going to profit by it, too.

• **Bid Business**—There's no getting around the fact that price is the biggest factor in securing bids for electrical construction. However, if you can combine the art of knowing how to deal with price, together with knowing your customers and sources of leads, you may be able to put price into perspective.

The more stress the distributor salesman puts on service and quality of products, the more he stresses headache-saving, dependable delivery in the correct place at the correct time, and the more the distributor salesman emphasizes the value to the contractor of buying all his electrical materials for the job in one place, the more he will be able to overcome the obstacle of price.

Another way the distributor salesman can further strengthen his future position in supplying material for bids awarded to his customers is by collecting information weekly from electrical inspectors in his territory as to why various electrical jobs were turned down. By doing this and passing the information on to his contractor customers, the salesman's providing a valuable service that will enable contractors to avoid

How To Maximize Your Sales . . . In the UTILITY Market

THE DISTRIBUTOR SALESMAN calling on industrial accounts gets to the heart of the electrical "innards" of the plant by spending as much time as he can with maintenance men and engineers. He does this without bypassing the buyer. The same is true with utilities.

In utilities, it is the engineering department that drafts plans for the future, the operations department that puts these plans into effect, the line supervisors and crew that speed up and work on these plans.

Each of these departments should be cultivated by the distributor salesman because each—along with the purchasing department—can be influencing factors in getting electrical products specified.

What goes into selling the utility? the electrical distributor's salesman must be: (1) backed up by complete and special stock; (2) able to talk the language of the engineer as well as the buyer; (3) cognizant of the personalities involved in the ultimate sale of electrical products to utilities; (4) able to sell in large volume to cover the cost of the considerable warehouse space and inventory required; (5) able to spot the time and place he can plant sales ideas without stepping on anyone's toes.

What does the buyer want from you? He needs: information (at all times) of what you carry in stock; information about new developments in classes of electrical supplies and equipment that the utility is buying.

In addition to all this knowledge you have to provide him with, the purchasing agent also requires you to: tell him about any change in methods of delivery, terms or price—at once; be familiar with the applications of the products you sell to meet the needs of the utility; study the utilities' requirements and the practical applications of the materials and devices you're going to sell them; help the utility get what is due in the way of service; follow-up when you get an order by making sure the materials have been delivered, are operating satisfactorily, and the proper adjustments, if any, have been made.

What You Have To Know

It takes time to sell the utility market—both for the wholesaler to break into the market and for the salesman to make his calls. In this market, crash programs lead nowhere.

• **Special Stock**—You have to have a working knowledge of products like pole line hardware, tools, insulators, cutouts, splicers, transformers and testing equipment.

• **Know the Language**—Be able to talk their language. They are probably receptive to an approach that stresses fast, reliable service, guaranteed stock on an emergency basis from a reliable source, cost-cutting and cost-consciousness.

• **Know the Tack**—Diplomacy on the part of the salesman is needed when he's calling on the large or

errors and increase efficiency. Information of this sort might be hard to obtain—and if the salesman does gain access to it, he must make sure that when it is passed on to the contractor customer it is always correct. One slip-up may mean a lost account.

The distributor salesman can get in on the ground floor of a bid job by checking out sources that pinpoint new jobs coming up. Sources to check are: newspapers (look for downgrading in zoning laws from residential to commercial and industrial); real estate firms (property bought, buildings sold).

Know where your big leads are. They'll come from satisfied customers; countermen and inside salesmen; manufacturers' representatives; conventions and trade shows; Dodge reports; architects and consulting engineers; open eyes and ears.

• **Selling Modernization**—The average contractor needs and wants to modernize his working methods. If you are successful in selling such modernization means as better tools to the contractor, you not only help him cut his costs and make more money—you also create more business for yourself.

Modernizing the contractor's working methods with tools and other equipment has a number of important advantages for the distributor salesman: it creates an identity for you in a highly competitive market; it is a profitable opportunity; it can give you access to more accounts; because of the rising cost of labor, time-saving tools are very important to the contractor—therefore, it is a tremendous growth market.

In selling tools to the contractor, it's important that you show and demonstrate new tools or new models of old tools. Carrying a tool sample on calls can be a profitable habit for two big reasons: (1) it can increase your sales along with orders of electrical supplies and maintenance equipment; (2) it is a good door-opener to an account that has not been buying from you.

Typical instances in which a tool can be sold to the electrical contractor are:

• An established tool which the contractor is not yet using;

• A tool which has a feature or qualities which the contractor should consider buying as a replacement for tools he is using;

• A tool that lends itself to a job which the contractor has just taken, or is bidding.

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small utility. This market abounds with personality pitfalls. For example: purchasing is pretty well standardized. In each office, there is usually a standards group made up of technical personnel that rules on the fitness of materials to be used by the utility and passes on all information and suggestions sent through channels. You have to see to it that these groups are not slighted. Some salesmen advise: don't let the buyer know you are getting an order, even though you have been told by one party to expect it. Rather, tell the buyer that you stand ready to fill any request they may desire in the future and that you would stand ready to be of service should any "order like that appear from engineering or planning."

You also have to get the lines you sell on the approval list of lines that the utility buys. How? First of all, through good relations with the standards groups. Convince them of the quality of your lines so they have them approved (perhaps your suppliers have already accomplished this). Then you may be assured of at least part of the business in many categories.

• **Selling Savvy**—The real selling starts with the planning and operating engineers, line foreman or line crew. They have their fingers on many of the basic electrical needs for the company. A proven way to initiate orders—particularly for pole line hardware and tools—is through the lineman. Product literature is given to him in the hope that he will funnel the information and his desire for the products described back to management. If management approves, then your products are specified, put on the purchasing cards of the utility and, as long as your service, quality, and follow-through are good, you probably will stay there for a long time.

Tandem Selling

In selling utilities, the distributor salesman and the factory man can really do an effective job if they work together. The tandem selling force of the distributor salesman and the factory man should have their duties separated into the following categories:

Salesman: bird-dogging—flushing out sales potential; personal contact; initiation of sales; follow-through on orders; source of immediate supply; strict attention to service; emergency calls; answers to immediate problems in variety of electrical products supplied; devotion to details.

Factory man: he must be relied upon to furnish the technical and engineering assistance when major problems suddenly appear.

• **Take Your Time**—You may have to call on 20 people in a utility before you get an order. It can take all day just to make one call. But this is how you can sound out their problems, complaints and new product interests. When you do sell utilities, you don't sell wire by the foot. You sell it by the mile. Connectors don't go by the dozen—they go by the 300's. It's generally big-volume business.

• **Lead Source**—A useful by-product of calling on utilities is this: they know as much or more about the economic potential and immediate growth prospects of a state or city than anyone else. That's another reason why it pays to take your time on calls.

Utilities are not the only customers who buy pole-line hardware, cutouts, tools, splicers, transformers and testing equipment. Municipalities and REA co-ops account for a big chunk of transmission and distribution sales.

There are a number of requirements a salesman must meet before he can attempt to sell this market, which is quite similar to the utility market. He must know well all the products he sells (factory courses can help you out); he must constantly learn about new items that are coming out on the market; he must familiarize himself with the operations of REAs by visiting customers and reading about them as much as he can.

Worksheet 3: Evaluating an Account's

PAPER WORK traditionally is the bane of salesmen. But some paper work can serve as a key to increased sales. This is the aim of the form shown here and the one on the following two pages, which were developed by ELECTRICAL WHOLESALING. Worksheet 3 is designed to assist the distributor salesman in evaluating an account's buying potential, and Worksheet 4 is meant to help him pinpoint the product sales opportunities.

The information required on Worksheet 3 can be obtained from three sources—your company records, your contact at an account, your own estimates. No doubt, a number of customers would decline to divulge some of these facts; in this event, you will have to rely on your own estimates. When the information required (and perhaps more) has been put on paper, you should have a useful profile of each account's buying potential and preferences—one on which realistic sales goals can be based and pursued.

The information required on Worksheet 4 (next two pages) will be drawn primarily from your observations of an account's product needs. This form, which is based on the 11-page article which immediately follows it, should be most useful with your industrial customers. It offers—almost at a glance—a check-list guide to a wealth of potential sales opportunities.

1. Name of account: _____

2. Type of account: ☐ Contractor ☐ Industrial ☐ Utility ☐ Other _____

3. Contacts at account:

   Name: _____ Title: _____

   Name: _____ Title: _____

   Name: _____ Title: _____

   Are we contacting everyone we should: ☐ Yes ☐ No

   If not, whom else should we contact: Name: _____ Title: _____

4. Annual volume of business with account: $ _____

5. Trend of account's purchases over last five years:

   ☐ Rising ☐ Dropping ☐ Up and Down

6. Credit standing of account: _____

7. Profitability of account: ☐ Good ☐ Fair ☐ Marginal ☐ Unprofitable

8. Rate account's prospects for growth as a company:

   ☐ Rapid ☐ Gradual ☐ Static ☐ Declining

9. In general: rate account's buying potential --

	As a User	. . . an Installer	. . . an OEM
Good	☐	☐	☐
Fair	☐	☐	☐
Poor	☐	☐	☐
None	☐	☐	☐

10. In dollars: rate account's buying potential--

Product Groups	Total purchases during 1960	Our share of total	Our percentage of total	Our percentage goal of total
Wire and Cable	$	$	%	%
Conduit	$	$	%	%
Conduit Fittings	$	$	%	%
Wiring Devices	$	$	%	%
Lugs and Connectors	$	$	%	%
Outlet Boxes	$	$	%	%
Motor Controls	$	$	%	%

Buying Potential and Characteristics

Product Groups	Total purchases during 1960	Our share of total	Our percentage of total	Our percentage goal of total
Motors	$	$	%	%
Circuit Breakers	$	$	%	%
Fuses	$	$	%	%
Transformers	$	$	%	%
Panelboards	$	$	%	%
Lighting Fixtures	$	$	%	%
Lamps	$	$	%	%
Ballasts	$	$	%	%
Tape	$	$	%	%
Signalling Equipment	$	$	%	%
Heating Equipment	$	$	%	%
Tools	$	$	%	%
Industrial Electronics	$	$	%	%
All Products	$	$	%	%

11. Rate account's other major sources of supply:

First: _____

Estimated percentage of electrical products purchased from this company: _____%

Major reason account buys from this company:

☐ Price ☐ Preferred Lines ☐ Friendship ☐ Other _____

Second: _____

Estimated percentage of electrical products purchased from this company: _____%

Major reason account buys from this company:

☐ Price ☐ Preferred Lines ☐ Friendship ☐ Other _____

Third: _____

Estimated percentage of electrical products purchased from this company: _____%

Major reason account buys from this company:

☐ Price ☐ Preferred Lines ☐ Friendship ☐ Other _____

12. Rate account's attitude toward us:

☐ Friendly ☐ Unable To Determine ☐ Unfriendly (why: _____)

13. Rate account's opinion of us in the following areas:

	Excellent	Above Average	Adequate	Poor
Stock Availability	☐	☐	☐	☐
Order Handling	☐	☐	☐	☐
Delivery	☐	☐	☐	☐
Information Source	☐	☐	☐	☐
Engineering Assistance	☐	☐	☐	☐
Billing Accuracy	☐	☐	☐	☐
Courtesy and Cooperation	☐	☐	☐	☐
Over-all Service	☐	☐	☐	☐

Worksheet 4: Pinpointing an Account's

Name of Account _____

☐ Contractor ☐ Industrial ☐ Utility

Titles of Contacts _____

	Replacing Defective Equipment
LIGHTING EQUIPMENT	☐ Group replacement of lamps
MOTORS, CONTROLLERS	☐ Worn or broken contact assemblies ☐ Defective mechanical linkages
HEATING EQUIPMENT	☐ Shortened or open heating elements
WIRES, CABLES, BUSWAYS	☐ Replacement for insulation failures ☐ External physical damage changes
RACEWAYS	☐ Corrosive destruction replacements ☐ External damage from heavy impact
OVERCURRENT PROTECTION	☐ Basic fuse needs ☐ Adequate overcurrent protective devices
SWITCHING, CONTROL	☐ Wide variety of snap switches ☐ Complete relays and contactors replacements
TRANSFORMERS	☐ Burnt out, shorted or open windings
HIGH VOLTAGE SYSTEMS	☐ Fuse elements, bushings, potheads, etc.
SIGNALLING, COMMUNICATIONS	☐ Defective sound devices
INSTRUMENTS, METERS	☐ Overload, breakage, loss, theft, etc.
TOOLS, SUPPLIES	☐ Advantages for unlimited hand and power tools ☐ Routine supply replenishment

Product Sales Opportunities

Changing Equipment Types	Increasing the Electrical System
☐ Better illumination ☐ Increases in color quality ☐ Ballast power factor increases	☐ Equipment for higher ft-c
☐ Overload elimination ☐ Alterations from ac or from dc ☐ Overload protective devices ☐ Full voltage and reduced voltage starter changes	☐ Material for production increases
☐ Proper equipment for load increases	☐ Complete home heating
☐ Larger wire for voltage drops ☐ Larger conduit for larger wire ☐ Wire insulation type variations ☐ Better wiring methods	☐ Relief for existing overloads
☐ Corrosion-resistant materials ☐ Rigid to flexible application possibilities	☐ Sales follow-ups
☐ Changes in size of protective devices ☐ Items for coordination of overcurrent protection ☐ Factors for limiting current	☐ Products for effective protection
☐ Longer-life switch installations ☐ Light to heavy duty model modifications ☐ Substitution to automatic switching ☐ Low voltage relay switching changes	☐ Operation and maintenance improvement
☐ Larger unit advantages ☐ Ventilation type improvements ☐ Noise output selections	☐ Increased energy requirements
☐ High voltage distribution expansions ☐ Insulation, equipment and supplies advances ☐ Outdoor circuit protection	☐ Expansion of systems
☐ Added protection for additions and renovated areas ☐ More master stations	☐ Added system for work efficiency

How To Pinpoint Ready Product Sales Opportunities

Here's a comprehensive survey of electrical equipment needs that you can scout out and sell in three categories—(1) replacing defective equipment, (2) changing equipment types and (3) increasing the electrical system. The prime emphasis in this article is placed on products and not on customers.

A PRODUCT-BY-PRODUCT sales potential study of the market for electrical equipment can best be made by dividing potential equipment sales into three categories, based on the purchasing motivation of the customer. These three categories are as follows:

1. Sales of electrical units, devices, assemblies or components to replace worn-out or defective equipment of the same types.

2. Sales of electrical products to replace presently used products which may or may not be worn out or otherwise defective, but which do lack the superior performance or application characteristics of the products replacing them.

3. Sales of electrical products to perform functions which are not presently being performed in the electrical system—products which are new to the system and represent additional utilization or distribution elements.

The following is a comprehensive survey of these three categories, aimed at the activities of the electrical distributor's salesman who calls on electrical contractors, plant electrical people and electric utilities. However, prime emphasis is placed on the products and not on the customers.

1. Replacing Defective Equipment

LIGHTING EQUIPMENT—Of course, the most common item here is lamp replacement. This includes fluorescent, incandescent, mercury vapor and special lamps (heat lamps, sun lamps, anti-bacteria lamps, black light lamps). Quantities sold may be for immediate installation in existing systems or for reserve stock from which to draw replacements.

Such sales offer the opportunity to sell large quantities for group replacement programs. In such programs, all the lamps in an installation are changed at one time, even though the vast majority of them are still operating. The idea behind this plan is to install a complete set of lamps in a system and then change all of the lamps when they have all operated for a period of time just under the average operating life of the given lamp. For instance, a complete installation of 96T12's would be group-relamped after 10,000 hours of operation (the time depending upon the type of lamp and the number of hours the lamp operates per start).

The ideal condition is to group-replace the lamps just before they start failing on a grand scale. By group replacement, the cost of lamp replacing can be greatly reduced, work slowdowns and stoppages due to lighting failures can be averted, and more reliable operation can be expected from ballasts and auxiliary equipment, and lighting can be maintained at higher and more uniform foot candle levels.

Lighting accessories which make up a substantial group of replacement items include: ballasts and transformers for fluorescent and mercury lighting and fluorescent starters. Again, these items can be sold in quantity for maintenance stocks.

MOTORS AND CONTROLLERS—In this area, there is much opportunity for selling replacements. Motors which develop ground faults or burn out can be replaced either by new motors or by repair or rewinding of the defective units. **It's up to the salesman to know the comparative costs of these two possibilities** and to promote the advantage of replacing a motor when that seems advisable. A new motor is, first of all, an up-to-date motor incorporating the various advances in construction and insulation since the original motor was made.

Motor controllers also offer replacement sales opportunities. Failures of operating mechanisms due to severe duty or insulation failures in the wiring may call for entirely new units—either manual or magnetic starters, full-voltage or reduced-voltage types.

Pushbutton stations and other switching devices used in magnetic motor control circuits develop mechanical or contact troubles.

SALES opportunities are at least as numerous as the components of the present electrical system.

HEATING EQUIPMENT—Here, the weak link is the heating element itself. Space heaters and industrial heaters—wall and ceiling panels, heating cable, immersion heaters, strip heaters, etc.—can develop opens in their alloy elements, requiring replacement of the heating unit itself.

WIRES, CABLES AND BUSWAYS—These are the conductors of electrical systems and are well known for the many types of failures which require replacement. Ground faults are the most common causes of replacement. These occur when the insulation fails and the conductor makes contact with the conduit enclosing it or with the cabinet or housing enclosing it. Then conductors touching each other or simultaneously contacting ground produce short circuit faults which can cause extensive damage to insulation due to the thermal effect of very high current flow. Still another cause of conductor failure might be rough handling during installation, such as tearing of plastic insulation at bends and bushings due to insufficient pulling compound or excessive length of the pull and the force required.

Then in older installations, years of heat accumulations in the conduit and general oxidation may have made rubber insulation brittle and defective. Moisture penetration of paper-insulated cables is another reason for replacement. Loss of dielectric strength in high voltage cables is still another reason.

Busway or conductor-in-conduit circuits may require replacement due to external physical damage—impact of moving equipment such as trucks or heavy machinery being moved by a crane or hoist. Busway has also been severely damaged by short circuit faults in the absence of proper overcurrent protection—where the protective device did not operate at all or did not operate fast enough.

RACEWAYS—This includes rigid conduit, thin-wall conduit, wireways, auxiliary gutters, surface wireways and underfloor wireways. **Corrosion and external damage due to impact of heavy forces are the two most common causes of replacement.**

Steel conduit is susceptible to destructive attack from many types of corrosive industrial atmospheres—such as at certain chemical plants, sewerage disposal plants and some areas in steel plants.

Aluminum conduit, although highly corrosion-resistant, has shown weakness in some direct burial applications where the soil attacks the conduit. And for use of conduit in concrete, excessive use of anti-freeze admixtures can attack aluminum conduit.

OVERCURRENT PROTECTION — Replacement of fuses is a basic need. This includes the complete one-time assemblies and the elements for renewable fuses. Circuit breakers also develop mechanical troubles and require replacement. Thermal overload relays can burn out. Bimetallic devices can fatigue. **And the point should always be stressed that overcurrent protection must be in perfect working order or a hazard is created.** Any overcurrent device which is even suspicious in its ability to perform must be replaced. And again, a complete stock of essential overcurrent replacement units should be maintained, particularly where the electrical system serves commercial and industrial areas in which power restoration must be made quickly.

SWITCHING AND CONTROL—Replacement

Type of Motor Enclosure Used Rates

of wiring device switches—the standard wall switches for lighting and receptacle outlets—is a bread-and-butter item. **All of the various toggle and tap-action switches can develop trouble from continued or severe usage.**

Safety switches can develop faults, requiring replacement. Fatigue of spring actuators, loss of pressure in clips holding blades and damage due to overheating, because of high resistance contact in switch contacts or in associated fuse clips in fusible switches, are typical causes of faulty switch operation.

Magnetic switching devices—relays, contactors and automatic transfer switches—are also candidates for replacement due to failure. Broken parts, sticking contacts, shorted or open operating coils—any of these faults may simply require replacement of the parts or replacement of the entire unit itself. Inasmuch as these devices are essentially remote-control devices, their proper operation is generally vital to industrial processes or commercial load operations. For this reason, replacement of the complete relay or contactor is frequently mandatory, even though only one of its operating parts is defective. Usually, when one part goes it is an indication that other parts may be correspondingly weakened.

Low-voltage switching equipment—the relays and small control switches themselves—is another area for replacement sales.

Still other possibilities for replacement sales are: float switches, pressure switches, limit switches, selector switches, plugging switches, foot switches and time switches.

TRANSFORMERS—Failure of transformers may require either repair or replacement of the unit. Repair may necessitate rewinding or recoring, and this may be more expensive than simple replacement. **Of course, the best solution in any case depends upon the size and type of transformer involved and the nature and extent of damage done to the unit.**

Sale of a new unit is more likely in cases where the steel laminated core was damaged in addition to the windings, where the extent of damage would require complete hand-rebuilding of the transformer. Then the new unit, made on a mass-production basis, would offer lower replacement cost—and, again, might offer other advantages over the old unit. These advantages might include smaller size for the same kva load, less weight, higher insulation strength, quieter operation and other characteristics which have been more finely developed since the old transformer was manufactured.

In the very small sizes—bell transformers and control transformers—replacement is the standard answer. This is also true of the small size dry-type transformers for general purpose power and lighting and for special purposes.

HIGH VOLTAGE SYSTEMS — Replacement sales possibilities in this category somewhat parallel the foregoing descriptions of specific equipment. Although any piece of equipment might fail and require replacement, larger equipment—power circuit breakers, heavy transformers, high voltage motors and controllers—is generally repaired, unless some form of total damage has been done to it—such as lightning destruction or physical impact. Bread-and-butter replacement includes: fuse elements, cables, splicing supplies, insulators, bushings, potheads and other terminating devices. In outside work, poles and crossarms may have to be replaced along with all of the accessory devices for pole line distribution.

SIGNALLING AND COMMUNICATIONS—Bells, buzzers, horns, signal lights, annunciators, loudspeakers, microphones, amplifiers, intercom units, clock and program system components, signal and control wires and cables, closed-circuit TV components, fire alarm units, burglar and intrusion alarm units—these are some of the elements which constitute the substantial replacement sales market.

INSTRUMENTS AND METERS—In the wide assortment of measuring and testing instruments—both the portable units used by working mechanics and the bench and switchboard units—there is always a percentage needing replacement for such reasons as misapplication, overloading, breakage, loss, theft and mechanical faults due to old age.

TOOLS AND SUPPLIES—This is an almost unlimited area of replacement sales. Careful check should always be made into the need for hand tools and power tools, both large and small; and such routine supplies as tape, connectors, fittings and the almost endless variety of small hardware are generally in need of stock replenishment.

2. Changing Equipment Types

LIGHTING EQUIPMENT—Change from incandescent to fluorescent lighting equipment is a sound recommendation for general area lighting where more light of better quality is desired with the least modification of the existing electrical system. Or change from fluorescent to incandescent for store highlighting.

Change from standard fluorescent lamps to high output, power groove or very high output lamps is feasible where the existing spare capacity on the branch circuit permits the additional loading. Such application can boost light output with no change in circuit wiring.

Change from starter-type lamp operation to rapid-start or instant-start operation eliminates the need for starters and the consequent maintenance.

Replacement of incandescent lighting with mercury-vapor luminaires offers advantage for various high-bay interiors and many outdoor areas.

Consider change in the type of luminaire operation—i.e., direct, semi-direct, indirect. Such change can provide higher lighting intensities, better brightness ratios, reduced glare, less shadows—depending upon the actual change, such as from direct to indirect or from semi-direct to direct.

Careful Consideration

Change in the color quality of fluorescent lamps can often improve the over-all lighting effect, particularly in stores and decorative areas where accurate color rendition of furniture, furnishings and merchandise depends upon whether the lamps are cool white, deluxe warm, gold tone, etc.

Change from low-power factor ballasts to high-power factor ballasts reduces loading on branch circuits and can make spare capacity available.

Use of lead-lag ballasts in place of series-type ballasts can reduce stroboscopic effect in viewing moving objects under fluorescent lighting by reducing the flickering due to current alternations.

Change from 120-volt ballasts to 277-volt ballasts offers greatly increased kva of lighting per circuit when the higher voltage is available.

MOTORS AND CONTROLLERS—Changes in the type of equipment may offer important operating benefits.

Change in the horsepower of a motor for a given load may eliminate overloading where the motor presently used is too small or it may permit better loading of the motor where the motor is too large for the driven load.

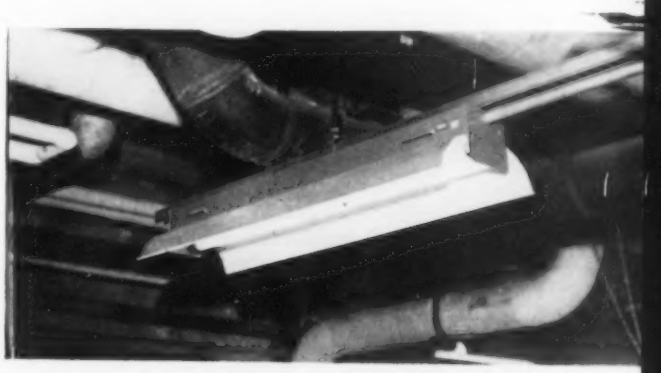
Change from squirrel-cage to wound-rotor motor or vice versa may have some advantage in ac systems, depending upon need for control of the starting current where system disturbances are to be minimized, the desire for some measure of speed control or—in the case of wound-rotor to squirrel-cage—to eliminate the secondary circuit and controller and thereby simplify operation and maintenance when the advantages of wound-rotor operation are not required.

Careful consideration should always be given to the type of motor enclosure used—open type, drip-proof, dust-tight, etc.—and the possibility that better motor operation and maintenance could be obtained by using a different motor with an enclosure better suited to the atmosphere in which it is being used. In particular, care should be exercised to assure the use of explosion-proof motors in Class I hazardous areas to assure maximum safety.

Speed and torque characteristics of the driven load may require a different type of motor to match the load. Design characteristics of a motor should match the load and be compatible with the electrical supply system:

- Design B motors have torque, starting current and slip characteristics which make them generally suitable for most applications. Design B is the standard type and forms the basis for comparing performance of all other motor types.
- Design C motors have higher locked-rotor or starting torque than design B but have lower break-down torque. Locked-rotor current and slip are the same as for design B.
- Design D motors have high torque and high slip, suited to applications involving high inertia and frequent load changes.

SELL dimmers for lighting intensity control in commercial buildings.



ADD modern industrial luminaires in dark basements and machine rooms.

- Design A motors have higher locked-rotor current than design B, the same locked-rotor torque and higher break-down torque.

Change from ac to dc or from dc to ac is another possibility for sale of motors and often merits consideration. Use of dc motors as replacement for ac units is particularly recommended where speed variation is required or desirable. And in cases of change to dc, there is the possible sale of the power source to obtain direct current from the ac supply system.

Change from squirrel-cage or wound-rotor may be made to a synchronous motor for high operating efficiency and system power factor improvement.

In some cases, special motor units—gear motors, vertical motors, textile motors, flange motors and weather-protected motors—represent excellent re-

Corrosion Is Key to Raceway Replacement

placement units for other types of motors.

Manual motor controllers may be substituted for magnetic units in the lower hp sizes where such features as low-voltage protection and low-voltage release are not required or desired. And in such cases, the manual controller can serve the two functions of both controller and motor disconnecting means if it breaks all ungrounded supply conductors.

On the other hand, magnetic motor controllers provide better operation than manual controllers where the above low-voltage features are required, where remote control of the controller is required and where more than one control station is needed. A magnetic controller requires a separate disconnecting device.

Many applications can use change in the type of running overload protective device. Although such a device may be set to operate at the proper value of motor overload current, its time-delay characteristics may not match the speed-current curve of the motor with the given load. Running overload protection, whether thermal or magnetic, should be quick acting when the motor is not able to withstand normal starting current for too long a time. Such would be the case of sealed refrigeration compressor motors which operate in a coolant atmosphere. Failure to start due to locked-rotor could burn the motor up if it is not quickly taken off the line by the overload device. Then on the other hand, motors driving high inertia loads which take a relatively long time to come up to speed must be equipped with overload devices which have a long enough time-delay to permit the motor to come up to speed. Trouble in overload protection can often lead to sales.

A big area of possible sales of different type of equipment to replace units which may not be operating just right or may be operating with disadvantages to the system involves the question of full-voltage starters and reduced-voltage starters. Often reduced-voltage starters can be readily sold to replace full-voltage starters where the starting current of the motor under load is such as to cause serious disturbances in the distribution system. Such disturbances include light dimming and dropout of contactor coils due to voltage drop when the starting current saturates the feeder conductors. And in the area of reduced-voltage starters, each type—manual resistance, automatic resistance, automatic autotransformer, etc.—has distinct advantages which suit it to certain applications over the other types.

Another change which might be considered is from a straight motor controller to a combination type controller in which the single housing contains the starter and either an unfused switch or CB as a disconnect or a fused switch or a CB as both disconnect and branch circuit short circuit protection.

Other changes which might be made include: from non-reversing to reversing, from standard starter to multi-speed controllers for two-speed, single- or double-winding motors, or from a standard starter to a part-winding starter.

HEATING EQUIPMENT—Some sales possibility is offered by change from one type of electric space heating to another type. This may be from wall panels to ceiling panels, from either type of panel to ceiling heating cables, or from any of the foregoing to baseboard convection units.

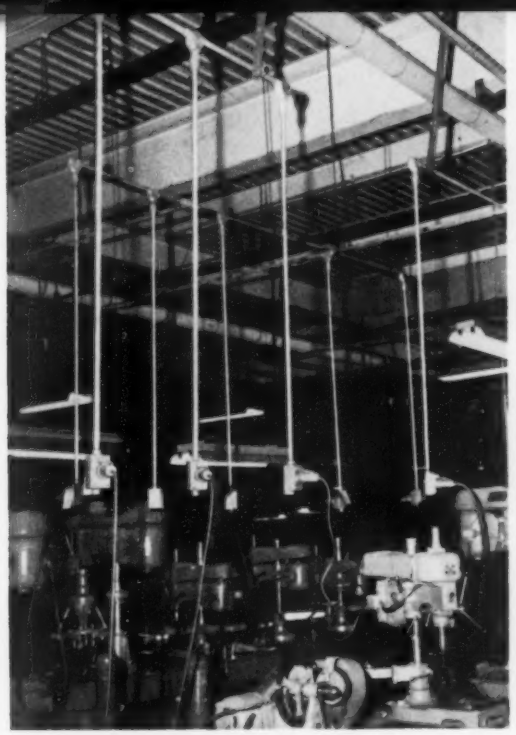
Other sales of heating equipment might result from analysis of industrial heating devices presently being used to determine if they have the right capacity for the job, if their construction is suited to the manner in which they must be installed and if change to equipment rated for another voltage might solve some particular problem. Interchange of strip heaters, cartridge heaters and immersion heaters is frequently a possibility. Or change may be suggested from resistance type heaters to banks of heat lamps. Or radiant heaters may improve some job presently being done with convection devices.

High frequency heating offers the possibility of change in the capacity of equipment to do a given job better or to handle increased load. This includes both induction and dielectric heating.

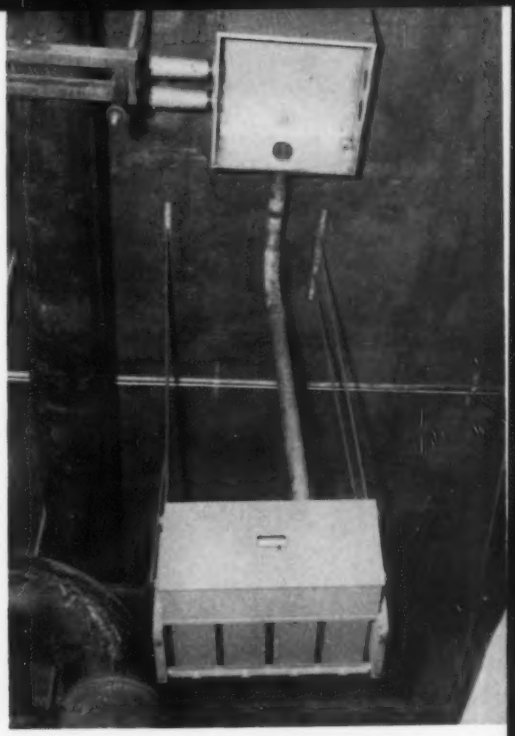
WIRES, CABLES AND BUSWAYS — Typical change possibilities in this category are numerous and include the following:

Replacement of installed conductors with new conductors of larger size might be dictated in many cases. Where voltage drop in feeders or branch circuits is excessive, change to larger size of wire generally provides reduced drop and lower copper losses in the circuits. Of course, the conduit or other raceway must be large enough to take the larger wire sizes, based on the Code allowance of 50% conduit fill for rewiring, which allowance often makes the move practical. The same increase in wire size might be made in circuits where voltage drop is just on the borderline but the wires have to be changed anyway because of fault. Whenever wires have to be changed because of fault, the advantages of increasing the size should be considered. Many times the circuit under consideration was only lightly loaded in original design, but voltage drop was calculated only on the light loading. Then as more load was added to the circuit, although not exceeding its rated capacity and the rating of the circuit protective device, the voltage drop became excessive.

Change in the type of wire insulation should be considered whenever wires have to be changed because of fault or even where conditions at the place of installation have changed since the original wiring was installed. Specifically, if the original wiring was type R or RH or TW, change to wire with higher temperature ratings should be investigated. Many times 60C and 75C wiring is installed where ambient temperature is not over 30C, the limit for use of such wire based on given current ratings in Code table 310-12, and then process machinery for steam



SELL the idea of using cord and plug connections for small industrial motor loads.



ADD capacitors at load locations for power factor correction.

or hot water is installed in the area raising the ambient temperature above 30C and possibly even above 75C, which is the temperature limit of the insulation. In such cases, heavy concentrations of steam may be playing directly on conduit carrying the 60C or 75C wires. Elimination of such condition may be made by relocating the conduit circuit, by changing to higher temperature insulation or both. Such changes might be dictated by faults which have actually occurred in the system or by wise decision to avoid the occurrence of such faults.

Typical insulations (with their maximum temperature limits) which might be used in such cases include: RHH - 90C, MI - 85C (or up to 250C for special applications), V - 85C, AVB - 90C, AVA - 110C, A or AA - 200C, AI or AIA - 125C and SB - 90C. And, again, when changing wires in existing concealed conduits, there is an opportunity to increase the wire size if desired, and the conduit can be filled up to 50% of its cross-section area.

When change in the conditions of any existing circuits is necessary due to damage in the circuit or due to need for improving the operating characteristics, as pointed out in the previous discussion, thought should always be given to changing the wiring method used for the circuit and not just to replacing the defective material with new material of the same size and type. For instance, there is always the possibility that an existing one of the standard wiring methods—wires in rigid, wires in thinwall, wires in flex, wires in wireway, armored cable, MI cable, non-metallic sheathed cable, busway—ought to be replaced by one of the other methods which is better suited to the job. And change in the type of wiring method used might be dictated by repeated trouble with the existing method, by lack of flexibility, by lack of convenience, by modifications or changes in the loads served by the system or by change in layout.

For instance, in an industrial occupancy, repeated damage to thinwall conduit might call for rigid conduit. Or a need for varying tap locations on a conduit feeder would make plug-in busway a logical replacement candidate. Or the need for rerouting circuits through areas congested by pipes and ducts would indicate the superiority of flexible conduit.

Then where economy is as important a consideration as flexbility—and perhaps many of the circuits are temporary—non-metallic cable might prove to be a logical method for replacing other methods. And, of course, where comparatively frequent rearranging of industrial plant distribution is necessary to meet shifting load concentrations and varying machine layouts, busway has much to offer in its ready assembly and removal, eliminating the considerable labor costs attendant upon relocation of other wiring methods.

RACEWAYS—Change from one type of raceway to another would follow the foregoing possibilities for wiring methods. Specific reasons for change in type of raceway might include the following:

Corrosion of one type of metallic conduit provides a replacement possibility for another metallic type which is more resistant to the particular corrosive agent. Or a metal conduit might be replaced by conduit of the same metal which has a highly corrosion-resistant jacketing of plastic or other non-metallic material. Or a completely non-metallic conduit might be substituted, with equipment grounding provided by a separate conductor run in the conduit with the circuit conductors.

Then the possibility of galvanic corrosion at the junctions of dissimilar metals might create trouble in

Overcurrent Protection Devices Is Area

some atmospheres and require replacement of the conduit. Although, it is worthy of note that extensive application of aluminum and steel in tight connection has withstood such corrosion even outdoors in the saline atmosphere at ocean shores.

Strength might be a significant factor in some installations requiring the replacement of existing conduit for a stronger type, one which can withstand accidental impact, common in the particular area.

Change from rigid conduit to flexible, as stated previously, may be the only answer to certain problems of routing circuits.

Change from conduit to wireway might offer advantage where it is desired to change conductors frequently or where the permissible use of taps and splices in wireway offers particular advantage, or the number of conductors is a factor.

Other possible changes include: branch circuit conduits to flush floor ducts to better serve power, light and telephone outlets in office areas, or to surface metal raceways or multi-outlet surface assemblies.

OVERCURRENT PROTECTION — Change in size of overcurrent protective devices — either to larger or smaller rated units—is always recommended where the size of the device in use is either too large to provide effective overload protection in addition to short-circuit protection or is so small that nuisance opening or tripping on inrush currents exists. Of course, replacement of the device in each such case must be based on the principles of effective protection, as outlined from the safety standpoint in the National Electrical Code and as described from a convenience and efficiency standpoint in the literature of the fuse and circuit breaker manufacturers. The size of the overcurrent device must generally protect the conductor against loads in excess of its rating and must protect against short circuits. Where overload of the conductors capacity is provided elsewhere (such as in the running overload protective devices in motor controllers), practical application of the branch circuit protective device permits sizing the device for up to four times the motor current to permit passage of starting current without opening of the branch device but depends upon the device for short circuit protection.

An alternative to change in the size of the overcurrent device in many applications where improper operation is a problem is change to an overcurrent device which has the same rating or trip setting but has a time-current curve better matched to the current conditions of the load. A typical example is the replacement of a single-element fuse with a dual-element time-delay fuse of the same nominal rating to permit passage of inrush current while providing the same effective overload and short-circuit protection. In the case of circuit breakers, adjustable and interchangeable trip characteristics are available in the larger sizes of molded-case breakers and in the large power circuit breakers. Adjustable setting of the magnetic instantaneous trip element can often justify use of such a breaker over the non-adjustable type when selective coordination of overcurrent operation is desired or necessary for minimum power outages at times of fault.

One of the most important characteristics of modern overcurrent protective devices is adequate current interrupting capability. And this fact adds up to widespread potential for the sale of overcurrent devices to replace presently used devices which do not have the proper IC (interrupting current) rating for the job they are doing. Many devices installed in past years may have had enough interrupting capacity for the amount of short circuit current that the supply system could at that time deliver into a fault on the load side of the device. Since then, the size of the transformer supplying the system has been increased or has been incorporated into a spot network or full network so that the current which the system could deliver on a short circuit is higher in value than that which the protective device can safely interrupt. If the device should be called on to interrupt that much current, the device might be blown apart in the process, creating a fire hazard and the hazard of explosion to anyone close to it.

To bring protection up to its proper IC rating, fuses and circuit breakers must be carefully matched to their applications. In quantity of equipment and total dollar volume of sales, such proper matching of ICs can produce really big results in very many industrial and commercial distribution systems.

Coordination of overcurrent protection offers another area of investigation for potential sales. In any electrical system, a short circuit on a branch circuit should operate only the protective device for the branch circuit. In that way, only the faulted part of the electrical system will be automatically disconnected from the source of supply. If a fault on the branch circuit operates the overcurrent device protecting the feeder to the panelboard from which the branch circuit is derived, all of the circuits in that panel and in any other panels fed by that feeder are disconnected and a very large part of the system loses power. This latter condition, which is undesirable because much more than just the faulted part of the system is killed, can result when the feeder protective device is faster operating than the branch device.

Or the same problem can be related to a main service protection and feeder protective devices. There a fault on a feeder should be cleared by the feeder device, with the loss of only the load on that feeder. If however, the main device happens to be a fast operating device, like some of the current-limiting fuses for instance, and the feeder device is slower operating, like some other fuses, a fault on the feeder will open the main device and kill power to all of the feeders on the system. Proper coordination of an uncoordinated system can result in substantial sales.

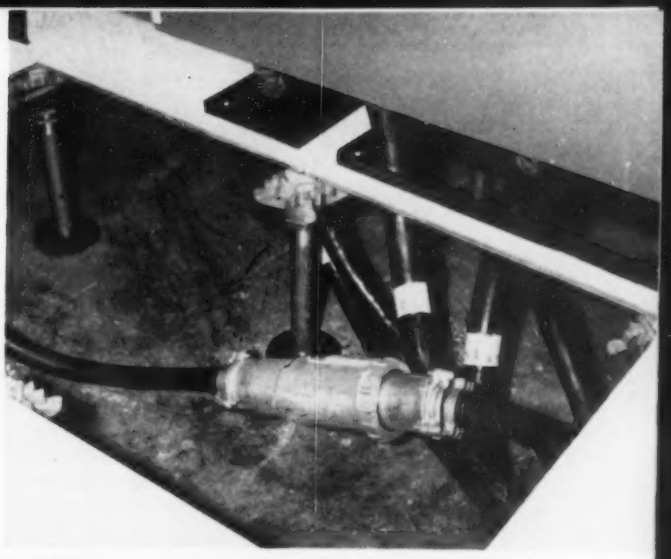
For Potential Sales

Current limitation is still another factor to be considered. Current-limiting fuses and circuit breakers under certain conditions can interrupt a short circuit current so fast that the current does not have enough time to go through even one-quarter of its usual sinusoidal alternation. As a result, the rms value of the current may be considerably less than it would be if the current could go through one-half of its usual alternation before it was broken. Current-limiting devices therefore minimize the thermal and magnetic destructive forces which are produced by short circuit current in the wires, cables, switches, transformers and all current-carrying parts of the system, from the power generator to the point of short circuit fault.

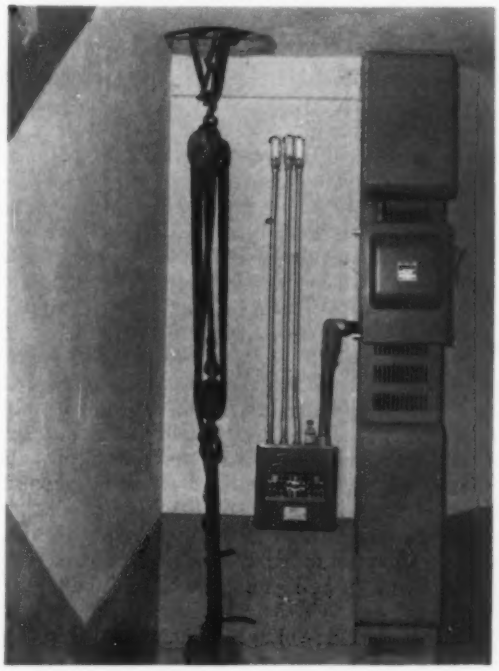
Such current limitation permits safe application of equipment with a given rating of short circuit duty in systems where the short circuit capability of the source exceeds the equipment rating but the current-limiting device keeps actual current flow below the equipment rating. This is very important in the application of busway or switchboards or motor control centers where the bus bracing is designed for lower short circuit duty than the system would provide without the current-limiting devices. Replacement of standard protective devices with current-limiting devices can often bring equipment application within the proper limits of their ability to withstand fault current flow until the device opens the circuit.

Changing the type of overcurrent protective device can be based on the following general characteristics: Fuses are generally faster operating devices than circuit breakers. CBs of the multi-pole type eliminate the problem of single phasing. Fuses are strictly thermal devices and are affected by ambient temperatures which can alter their calibration. CBs are available in purely magnetic types for strict current response. Fuses may require a switch in combination with them. CBs serve the functions of automatic protection and circuit switching control up to short-circuit values of current. Fuses are made in all sizes for economical application where short circuit currents may be as high as 200,000 rms symmetrical amperes. Circuit breakers for such high short-circuit duty are much more expensive and do not have speed of response or current limiting effect in themselves (although current-limiting fuses may be incorporated in either molded-case or power CB assemblies for very high short-circuit duties).

SWITCHING AND CONTROL—In the wiring device switches, standard toggle switches present the possibility of replacement by quiet-action switches or mercury switches for longer life. Standard lever handle switches may be replaced by tap-action switches or rotary switches. Simple ON-OFF switches may be replaced by dimming switches—either OFF-PARTIALLY ON-FULL ON types of multi-level switches with continually variable control or step-switching control for selecting one of several light levels.



LOOK into wiring under raised floors in modern areas serving computers and business machines.



SELL busway for riser modernization in tall buildings.

In the safety switch types, short operating life or other improper operation often suggests change from light-duty models to normal-duty or heavy-duty models. This will depend upon the use of the switch, the number of times it is operated in a given time, the nature of the load it controls and the atmosphere in the place where it is applied. Heavy-duty units must be used for frequent operation over long periods of time. In many cases, the need will arise for fusing at the location of a non-fusible switch, requiring a new switch. The need for quick-make, quick-break operation may dictate change in switches to provide long contact life in frequent switching of inductive loads or for high inrush of tungsten lamp loads.

Look for Transformer Sales Possibilities

Need for visible blades to add safety and facilitate inspection and maintenance may be another reason for change.

Other characteristics of modern safety switches which may dictate change in types of switches because the presently used units do not have these characteristics are: high-pressure fuseholders to reduce contact resistance and consequent heat rise in switches, providing longer life and lower maintenance for the switch; interlocking covers for safety to personnel, preventing opening of the cover with the switch in the closed position; padlocking provisions for effective locking of the switch in the OFF position for safe maintenance; internal construction features for better operation—double-break contacts, arc chutes or quenchers, circuit breaker mechanisms for higher load interruption; and installation features like removable interiors or reversible interiors for line or load terminals at top or bottom.

In magnetic contactor control of various power and lighting loads, there is the possibility of changing from magnetically-held contactors, with their constant-consumption of power for the coil and their drop-out on low voltage, to mechanically held contactors which draw current only during the short time it takes the contacts to close or open.

Change from manual switching to automatic switching of certain loads—sign lighting, outside building lighting, parking lot lighting, street lighting, electric heating for snow removal from sidewalks or driveways, pumps, fans, blowers, etc.—presents a wide range of sales possibilities. This area includes use of magnetic contactors and relays, with control of their operating coils made through photoelectric switches, time switches, thermostats, float switches, pressure switches, limit switches, etc. Or automatic control may be obtained by using the time switch or float switch or pressure switch to directly switch the load circuit in response to conditions of the controlled load—which might be lighting, water in a tank, pressure in a pipe, etc.

Change from line-voltage switching of lighting units and other branch circuit loads to low-voltage relay switching has a lot of potential when remote multi-point control and/or remote master control of loads is required or desirable. This is particularly true in modernization jobs where installation of three-way or four-way switch circuits would be difficult and expensive.

TRANSFORMERS—When transformers have to be replaced because of failure, there are many opportunities to sell equipment better suited to the task. A larger size unit might be dictated by increase in the load since the original unit was installed or by a desire for increase in the load served by the transformer. This applies to all transformers from the large power units to the small dry-type lighting transformers used to get 120-volt circuits from 480-volt or 240-volt distribution systems. Then, too, there is the chance to change the type of ventilation, i.e., from liquid-filled (oil or askarel) to dry-type (air cooled or gas cooled). For systems up to 600 volts, general-purpose transformers are the dry-type units.

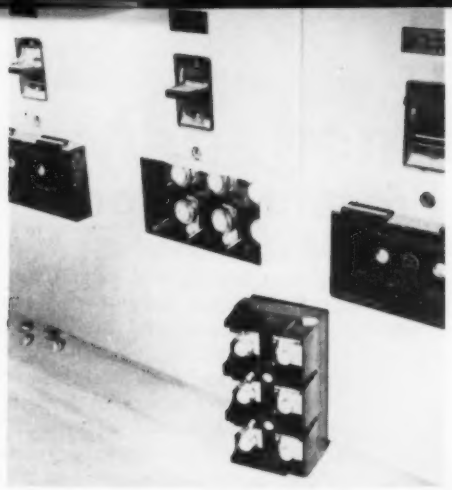
Noise considerations — specifically, the characteristic hum produced by transformers as a result of vibrations in the laminations structure—should always be included in selection of a replacement transformer, whether the original unit is being replaced because it is defective or because it is too small. When transformers are located in close proximity to relatively quiet areas occupied by people reading, studying or otherwise concentrating, any noise they produce may constitute an objectionable intrusion on the area. Although mounting and noise isolation techniques can do much to reduce transformer noise, it is best to select transformers designed with very low noise output for such areas. In cases where the original transformer was installed before an adjacent area was used for office space or for a library or school room, it may be possible to sell a new transformer solely to eliminate the objectionable noise from the original unit.

In replacement of transformers, the smaller size for given kva ratings of modern transformers compared with older transformers and the higher temperature ratings may offer certain distinct advantages. For instance, the new unit may be wall-mounting whereas the original unit had to be floor-mounted. Or the short-time overload of the new unit might be attractive to the purchaser. Better regulation is another factor.

HIGH VOLTAGE SYSTEMS—Replacement of equipment rated over 600 volts is a prime area of sales possibilities because of the very rapid growth in the use of primary voltage distribution in all types of industrial and commercial buildings and because of the equally rapid development of new and better insulations, equipment and supplies.

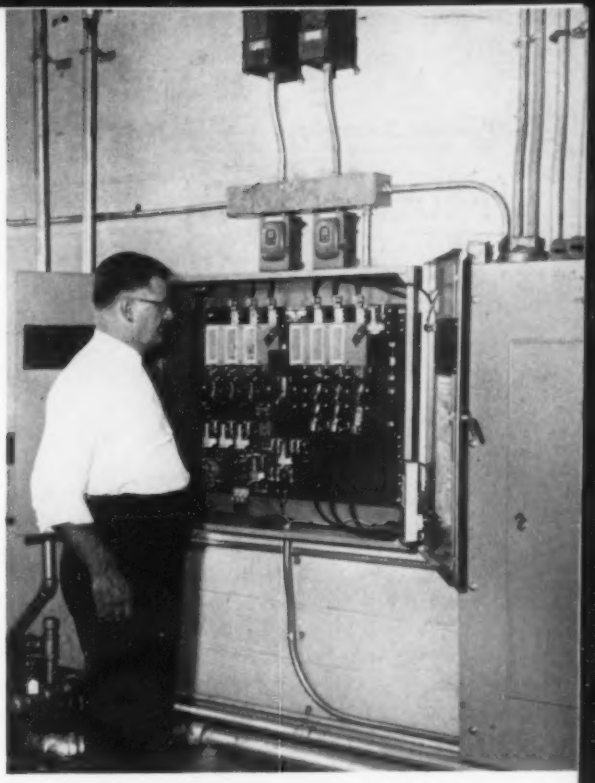
An important area for change in primary systems is that involving the circuit conductors. Modern high voltage cables are made with new and better insulations which permit application of non-shielded cables at higher voltages, allowing use of such cables in place of old shielded cables, with consequent labor savings in the installation. Of course, there are cases also where use of non-shielded cables has caused operating difficulties due to dielectric stresses and corona attack on insulation, and change to electrostatically-shielded cables is almost a sure bet. And with any change in type of cable, there is always a need for those accessories used in splicing and terminating high voltage cables. For indoor and outdoor applications, special splicing and terminal kits offer ease and economy. And the use of single-conductor and three-conductor potheads provides a highly engineered approach to sealing cable ends against entry of damaging moisture, to increase insulation strength at the terminal and to supporting the conductors at the connections.

In the use of transformers, there is always the



ADD real short-circuit protection with combination fuse-circuit breakers.

GET maximum power continuity with automatic transfer switches.



possibility of change from dry-type to liquid-filled type for outdoor use where high insulating capability is needed for protection against lightning strikes. Or change may be suggested from liquid-filled to dry-type for indoor applications, to eliminate the fire hazard of oil, to reduce the maintenance required for the transformer or to permit installation without the need for a vault or special venting or gas absorbers. And a factor which may prove important in changing the type of transformer being used is that of short-time overload capacity of the transformer, to permit use of the minimum size of transformer.

For switching and overcurrent protection, changes are possible among the three most common devices used—power circuit breakers, fused load interrupter switches and oil-fuse cutouts. The circuit breaker has important advantage for protection of outdoor circuits where quick power restoration can be made after transient tripping. The fused load interrupter does almost all the functions of a circuit breaker for indoor applications and offers very substantial economies in the bargain. The oil-fuse cutout is a highly effective control and protective device for current ratings up to 300 amperes, particularly for circuits rated up to 7500 volts to ground.

In the use of fuse-type overcurrent protection, change from non-current-limiting type fuses to the current-limiting type can effect the same benefits of safer current interruption, lower damage possibilities for distribution components and more effective coordination of operation of overcurrent protection. Then there is the possibility of change from expulsion type fuses to non-expulsion type for elimination of hazard to personnel when used indoors. Typical devices used to produce non-expulsion operation include the fuse condenser, a "muffler" and a "sneezer."

SIGNALLING AND COMMUNICATIONS — Improvement in the application of signal and communication equipment offers many sales possibilities:

Expansion of alarm systems might include the addition of sounding devices—bells, buzzers, etc.—and the associated wiring, to increase the coverage of signal protection to building additions or to renovated areas.

Expansion of public address systems, paging systems or music distribution systems, likewise requires more equipment—loudspeakers, line transformers, wire, raceway, amplifiers, microphones. In exploring the sales possibilities in the areas of signal and communications, it is important to stress the advantages which can be obtained, i.e., higher work production, more efficient use of personnel, a more pleasant store atmosphere, better school operation, more effective hospital administration, etc.—always tying the performance of the system to the particular activity pursued in the building.

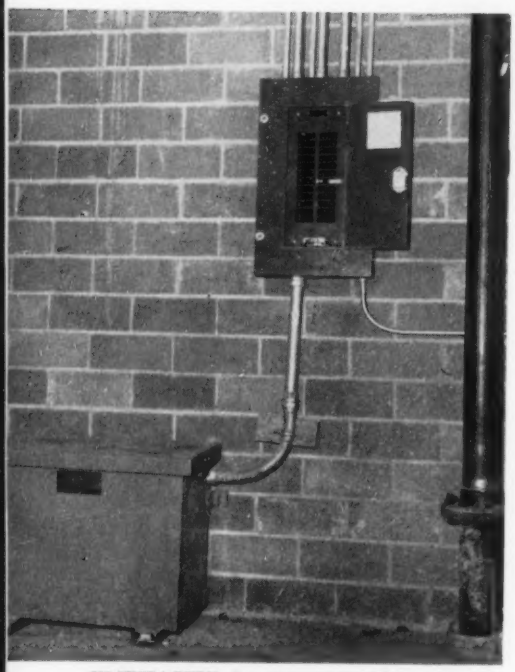
Intercom systems can almost always be expanded to produce more efficient operation of industrial, commercial and institutional buildings. Addition of more master stations and/or more remote stations might be suggested in any case, depending upon the particular plant or office layout.

Annunciator systems in hospitals, restaurants, hotels, etc., might be in need of expansion to meet expansion in the size of the building or change in the business activity.

3. Increasing the Electrical System

This third category of sales potential is concerned with the addition of new electrical utilization and

Much Can Be Added To Present Systems



EMPHASIZE the advantages of transformer load centers for large buildings.

the circuits and distribution layouts necessary to supply the new devices.

1. More lighting equipment is needed just about everywhere to bring lighting levels up to the modern footcandle levels recommended by the Illuminating Engineering Society (as an outgrowth of the Blackwell Report which found levels under 100 footcandles woefully inadequate for most industrial and commercial seeing tasks). More efficient light sources and the promise of high frequency (current alternating at 400 to 1000 cycles per second, instead of 60 cps) lamp operation can add much to the achieving of the new levels.

2. Motors and controllers can be added to any system in the form of more manual or automatic power machinery, air conditioning drives, conveyors, pumps, fans and other power drive additions which can increase production or improve living conditions.

3. Heating equipment is fast becoming popular both for space heating and for industrial purposes. Where the rate for electric energy is favorable, sale of complete electric house heating and supplemental heating for modernization or expansion jobs is a strong possibility. Advantages of cleanliness and low maintenance give electric heat the edge over heating with conventional fuels.

4. Wires, cables and busways are necessary additions where more utilization is sought in the way of motors, lighting, heating and other electric loads. More feeders and branch circuits offer relief from existing electrical overload and the opportunity to add needed load devices.

5. Raceways are logical sales follow-ups to the sale of more circuits to supply new load devices.

6. Overcurrent protection of all types, sizes and characteristics can often be added to existing electrical systems to provide effective protection where the existing protection is deficient. This includes: addition of fuses to protect various unprotected segments of a system; use of fuses to work in conjunction with circuit breakers to boost the interrupting capacity of the breaker; addition of motor running overload protection and other specific protection for load devices where hazard to life and equipment would thereby be eliminated; and addition of fuses or circuit breakers at those points in any system where absence of protection has caused repeated operating trouble or unusual maintenance expense.

7. Switching and control can be added to any system to improve the operation and/or maintenance of the system—to better suit the system to the needs for light, power, heat and signals. Such additions might be manual or they might be automatically controlled: disconnects for motors for safe maintenance; automatic ON-OFF control of circuits or loads; disconnects for fuses for safe changing; new switches to increase the number of control points; and isolating switches for sectionalizing systems or isolating system components, like transformers or motors.

8. Transformers can be added where there is need for more energy at some voltage level other than that at which the distribution system operates—provided, of course, that the distribution system does have the kva capacity for the load additions.

9. High voltage distribution represents the most significant area for expansion of industrial electrical systems which already utilize some primary feeders for load center transformer layout. The high voltage part of such systems is generally connected directly to the utility substation where spare capacity for load growth has been anticipated or can be readily added.

10. Signalling and communications offer possibilities for equipment sales based on the type of business conducted or the nature of the activity pursued, where it can be shown that something now being done in a certain way can be materially improved by incorporating the right type of signal or alarm system, the right public address or paging layout, an effective network of intercom to reduce personnel traffic and speed work output or a custom-designed system of private telephones. From FM radio and intercom systems for industrial plants to simple music systems in chicken coops to make the hens happy so they lay more and bigger eggs, this field of electrically-powered utilization in modern buildings is certainly one of the fastest growing with tremendous sales potential for new systems in new and old buildings.

Self Management Program Brings Areas Into Balance

Inefficient territorial coverage led management at Dauphin Electrical Supplies to revamp its areas and accounts into realistic and more profitable lines.

By Robert S. Bush

"You must sell to earn, and you must sell at a profit. But unless territories are assigned to the best advantages, and unless the salesmen are constantly aware of their customers' potential, no type of program will bring about a better profit picture."

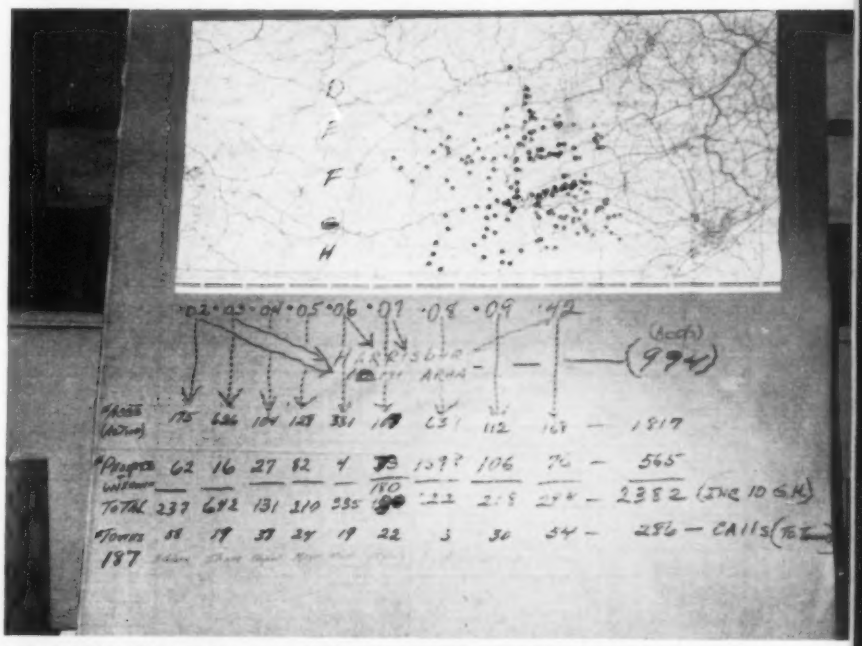
That's the opinion of Sales Manager George Hare of Dauphin Electrical Supplies Co., Harrisburg, Pa., who has learned from personal experience the importance of well-organized sales territories and the potentials of accounts. It was in 1958 that Hare and President A. J. Musser saw the inadequacies of their system of territories (EW—May '58, p. 44).

• **Visual Proof**—Realizing something was lacking in territorial coverage, Hare devised a chart listing the number of towns covered, and the number of active and prospective accounts of each salesman. The visual results were amazing to management at Dauphin.

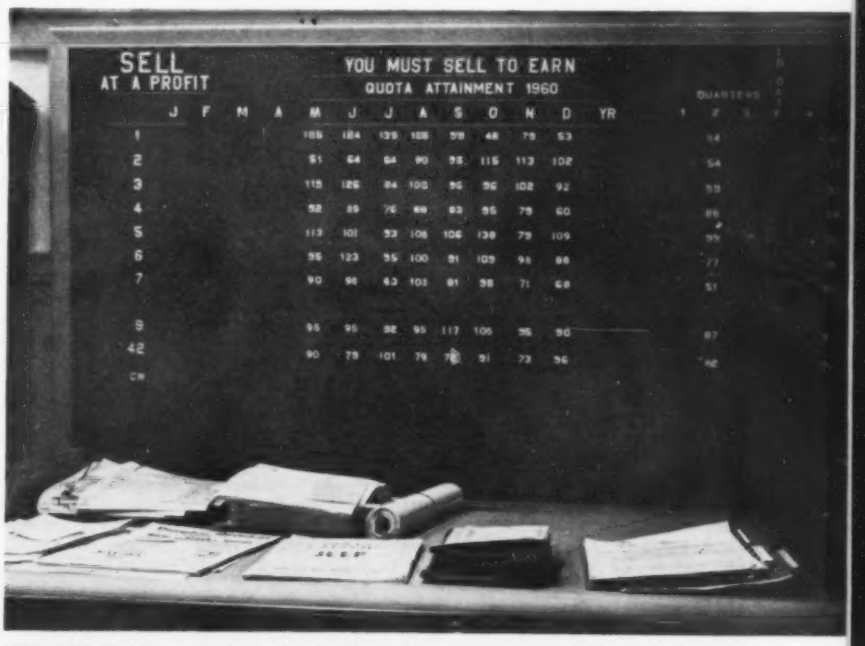
For instance, of the nine outside salesmen, the minimum number of accounts shown for an individual totaled 131. The maximum number of accounts for a single salesman showed 642.

"The whole situation seemed ridiculous when we looked at it on paper," Hare says. "Just think how many calls per day one man would have to make to give efficient service to 642 accounts. It just couldn't be done."

To remedy this situation, two drastic — but effective — steps were taken. First, with the help of sales personnel, management began reviewing past purchases and future potentials of each customer. From this,



THE PRELIMINARIES are seen in these inadequacies of sales territorial alignments, prepared by Hare in 1958. Comparing maximum and minimum accounts and prospects, figures range from 642 to 131, proving realignments were necessary.



THE PROGRAM as devised after inadequacies were recognized include individual quotas set by each salesman. Percentages of attainment are posted by Hare in his office. Numbers at left are codes for each salesman.

CONTINUED

'Though Salesmen Have Fewer Accounts,

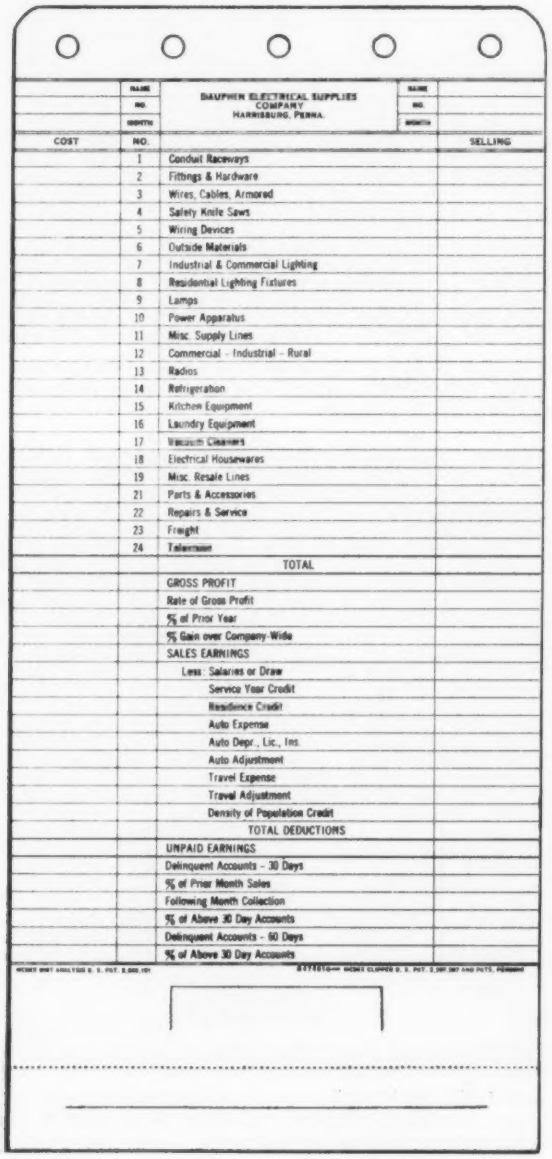
many accounts were eliminated because of various reasons, including lack of purchases and poor credit standing.

Second, from the total number of good accounts and favorable prospects remaining, territories were reassigned and accounts added and subtracted for each salesman. Basically, each salesman retained most of his former geographical area. Areas, however, were reduced for some personnel, and expanded for others. This brought areas and accounts for each salesman into a realistic perspective.

One good illustration involved the salesman who had 642 actual and prospective accounts. Although his sales territory and accounts were reduced considerably, his sales volume for the remaining accounts not only increased, but is now greater than the time before the realignment.

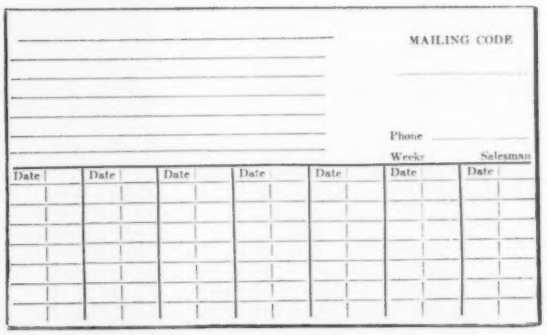
• **Answers Obvious**—Hare emphasizes that reductions in territories and accounts do not necessarily mean a reduction in total sales volume and profits.

"In the past three years, we have found that when our salesmen have a smaller area to cover and fewer customers to see, they can spend more time with each individual account. This enables them not only to give better service to each customer, but to spend more time finding out just



NAME	DAUPHIN ELECTRICAL SUPPLIES COMPANY HARRISBURG, PENNA.	NAME
NO.		NO.
MONTH		MONTH

COST	NO.		SELLING
	1	Conduit Raceways	
	2	Fittings & Hardware	
	3	Wires, Cables, Armored	
	4	Safety Knife Saws	
	5	Wiring Devices	
	6	Outside Materials	
	7	Industrial & Commercial Lighting	
	8	Residential Lighting Fixtures	
	9	Lamps	
	10	Power Apparatus	
	11	Misc. Supply Lines	
	12	Commercial - Industrial - Rural	
	13	Radios	
	14	Refrigeration	
	15	Kitchen Equipment	
	16	Laundry Equipment	
	17	Vacuum Cleaners	
	18	Electrical Housewares	
	19	Misc. Resale Lines	
	21	Parts & Accessories	
	22	Repairs & Service	
	23	Freight	
	24	Television	
		TOTAL	
		GROSS PROFIT	
		Rate of Gross Profit	
		% of Prior Year	
		% Gain over Company-Wide	
		SALES EARNINGS	
		Less: Salaries or Draw	
		Service Year Credit	
		Residence Credit	
		Auto Expense	
		Auto Depr., Lic., Ins.	
		Auto Adjustment	
		Travel Expense	
		Travel Adjustment	
		Density of Population Credit	
		TOTAL DEDUCTIONS	
		UNPAID EARNINGS	
		Delinquent Accounts - 30 Days	
		% of Prior Month Sales	
		Following Month Collection	
		% of Above 30 Day Accounts	
		Delinquent Accounts - 60 Days	
		% of Above 30 Day Accounts	



MAILING CODE

Phone

Week Salesman

Date	Date	Date	Date	Date	Date	Date

PERMANENT CARD for account not only lists dates of each call by salesman, but also lists how often calls should be made. Card is advanced in file to next date for visit. This gives salesman constant record of calls to be made.

REPORTS from management to salesmen show total costs and profits for 24-product categories. These give each salesman month-by-month and yearly picture of his progression towards quota, and how to boost volume and profits. Distributor-tailored report is Royal McBee Unit Analysis.

Customers Are Buying More'

what the potential is for the account," Hare continues.

"In this way, our salesmen have found that even though they have fewer accounts, their customers appreciate the added attention, and make more purchases."

• **Mutual Help**—Hare stresses that for any type of program to function smoothly, there must be joint cooperation between the sales personnel and management. Because of this, both he and Musser spent a great amount of time making calls with salesmen to determine whether the account should be reassigned. Because all of Dauphin's outside personnel are full-line salesmen, the type of products sold was not taken into consideration in the reassignment of areas.

In addition to the calls made with his personnel, Hare talked with them extensively in an attempt to get their opinions about the desirability of retaining various accounts and sections of their territories. This sort of session incidentally, is still maintained on a regular basis.

For instance, Hare spends about two days each week with sales personnel making suggestions about problems arising with particular customers, and planning sales techniques for future calls. In addition, he conducts a sales meeting for all personnel once every two weeks, and holds conferences with Musser, where they talk with individual salesmen.

• **The Realignment**—As a result of all of this groundwork, new lines of territories were drawn that management believed would be of mutual benefit to the salesman and the customer.

"We still work largely on a flexible geographical layout for our territories," the sales manager says. "It's amazing to see how beneficial these balancing factors have been. Although we still want new accounts, we do not want to face the same problem of imbalance again."

Even though Dauphin's salesmen now have a good balance of accounts, Hare still believes in flexibility. If the volume for a particular customer is not what the sales manager thinks it should be, he personally investigates the situation with both his salesman and the customer, and then decides whether to assign that account to another salesman.

He emphasizes that this keeps both the salesman and customer happy, and normally produces a volume increase of purchases from the account.

• **Enthusiasm Created**—As a result of working with fewer accounts and spending more time in ascertaining their needs, Dauphin's salesmen have been successful in setting up individual quotas for themselves. This has stimulated enthusiasm among personnel to meet their goals.

Several factors are involved in determining what the sales goals should be. Each salesman constantly reviews the volume of business for each account. In addition, he constantly checks with the customer to see what new products or product improvements can be sold.

In reviewing accounts, management provides monthly and yearly reports on sales, giving a breakdown for products. These reports show the distributor cost and selling price for each of 24 product categories. Totals include both selling price and gross profits. In addition, the rate of gross profit is indicated, and compared with the percentage of gross profits for the same period of the past year. In turn, this indicates the gain or loss percentage of total gross profits for the similar period of the previous year.

• **A Sales Aid**—At the end of a year, totals for the 12-month period are given to salesmen, who can then compare these figures with totals of previous years. On a monthly basis, if the salesman sees that gross profits are down from the preceding month, he checks to see in which product category or categories sales have dropped. He then attempts to emphasize sales in these categories to those customers who buy these products.

On the basis of these monthly and yearly reports of his total volume of business, the salesman is able to start thinking in terms of future quotas. After reviewing these reports, each outside man sizes up each account as to future expansion, modernization and reception to new products. From this comes an estimate of volume above the normal annual increase.

"Each of the men then set their own gross sales volume goals for the year," Hare says. "This is part of our self-management program. Management can assist him in many ways, but the salesman has the best knowledge of his accounts and can pretty well know just how much business he should and can get from each. Management should be a guide."

Since 1958, when salesmen started setting their own sales goals, the degree of accuracy for annual volume increases has been very sharp. According to Hare, the average percentage of increase for each salesman has been 8%.

Each month, Hare posts percentage figures showing how close each salesman came to meeting his quota set for the month. These figures are averaged out at the end of each quarter and at the end of the year. At a glance, each man is able to tell just how close he is coming to reaching his goal.

• **New Customers**—As with all distributors, Dauphin not only attempts to find out what new products its customers might be interested in, but also constantly looks for new accounts. The system of doing this, however, is beneficial.

Each salesman carries a set of blank 3x5 cards on which he lists prospects. When the prospect becomes an account, the salesman fills out a permanent information card on which he lists how often he should make calls. A record of the date of each call is made on the card. Files are indexed in terms of 50 weeks. Each time the salesman makes a call, he advances the card in the file to the position of when he wants to make the next call, depending on how frequently he has originally decided to call on the customer.

In this way, each salesman has his entire week's schedule planned well in advance, and can make sufficient preparations to see the customer.

• **Factory Cooperation**—In an effort to find the buying potential of a customer and his interest in new products, each salesman spends a minimum of one day per month in the field with a factory representative. In addition, salesmen always carry samples with them to show their customers and prospects. These samples are changed every two weeks, and are used to familiarize both the customers and salesmen with the products handled by Dauphin.

"I think all of the changes have been our salvation," Hare says. "All we can hope for is to change with the times, which will be for the benefit of our entire company. The success of our efforts depends entirely on how well salesmen and management cooperate in every effort. Both groups will realize the benefits."

Machine-Made Sales Analysis Gives Key to Profit Potential

Here's how Savasta Electric Supply, San Carlos, Calif., guides sales toward more profit with machine developed analyses to point the way for the distributor's salesmen. Results: good accounts are served better, bad ones built up or dropped and sales efforts maximized.

By Howard J. Emerson

A NEW PROGRAM which analyzes the profit potential of each customer a salesman serves during the previous month is helping Savasta Electric Supply, San Carlos, Calif., produce a higher gross profit at lowered costs.

From this analysis, owner Tom Savasta's salesmen are able to:

1. Earmark the accounts which warrant continued or improved service because they are carrying the load of providing volume with a gross profit above this distributor's operating costs;

2. Expose the customers who are currently unprofitable because the gross profit on their business is too low or their volume is too costly to handle.

And with this knowledge, Savasta and his salesmen are able to improve the company's profit position by:

1. Releasing salesmen's time for service of profitable accounts or the development of new business by making the low volume, low profit customers "house accounts."

2. Making it practical for Savasta to arrange with his salesman for a mutually-profitable, incentive-building system of compensation based on a percentage of gross profit instead of gross volume.

Here's how this distributor, with a main house in San Carlos and a branch in San Jose, handles this monthly analysis of the potential of each account his salesmen handle.

• **Costing Is the Key**—Using an NCR #3200, Savasta Electric Supply costs every sales ticket. During the month this information gives Savasta a constant picture of the concern's progress. Then, at the end of the month, the information is totaled for a master record of all customers. This is for Savasta's use only, but from that master a machine prepared report on each salesman's accounts is drawn.

The salesman's sheet lists each of his customers with the following information for each: 1. regular sales; 2. direct sales; 3. cost of regular sales; 4. cost of direct sales; 5. gross profit; 6. average gross profit from the salesman's total business.

(In computing the cost of sales, Savasta uses the manufacturer's price sheet at the time the sale is posted. During the year purchases made at various prices average out, and any discrepancy is caught when inventory is taken. It enables Savasta to keep from his salesmen the exact price he may have paid for merchandise, preventing any tendency to "give away" any extra profit which results from a special buy.)

In addition, the salesman is given a list of the number of transactions for each account during the month as well as a report on the number of calls he made on this customer.

With this monthly report in hand, the salesman can sit down with Tom Savasta and make specific decisions to improve next month's volume and gross and contribute to an improved net profit through a lowering of the firm's overhead.

• **Looking at Good Accounts** — Those customers that stand out on the salesman's monthly record as producers of good volume at a satisfactory gross profit can't be ignored or let well enough alone in the appraisal of this distributor's potential. Savasta and his salesmen can use this information:

1. To make sure that such profitable volume business continues in the months ahead. Savasta can check whether the salesman has been making his regular calls and offering maximum service to these accounts, or whether he has begun to take that business for granted. If he has been complacent, diverting his time to accounts that need development, then this good business will soon be going to another distributor who offers complete service.

2. To help develop other accounts which are not producing volume in line with their potential and at a satisfactory gross profit. By analyzing

PLANNING FOR PROFITS is the program underway at Savasta Electric Supply, San Carlos, Calif., where owner Tom Savasta (*center*) uses a monthly analysis of each customer's volume and profit to guide the house toward developing a better profit from each account. Working from the previous month's compilation to plan for a more profitable next month with Savasta, are San Carlos and San Jose sales managers, J. Tiscornia (r.) and J. Pugliese.

what has proven successful with the profitable accounts, the salesmen can learn what to emphasize more in his dealings with other customers.

3. To provide an indicator of profit potential in specific market areas. If the monthly breakdown of a salesman's accounts shows that, for example, more and more of the profitable customers are the maintenance departments of electronic manufacturing firms or the contractors specializing in servicing those firms, the salesman can direct his sales efforts more frequently to the development of this market.

• **Analyzing the Low Volume Customer**—When Savasta and a salesman look over the latter's record of sales for the past month, considerable attention goes to the study of the accounts who bought a small amount of goods during the period. But any action is based on more than the dollar volume or the gross profit realized from these small accounts. They look also at:

1. What is the account's potential volume, and what percentage of it is the Savasta salesman getting? If it is, for example, a contractor with four journeymen, Savasta would peg his total purchases at about $2,000 a month. To be a good customer for Savasta Electric Supply, that contractor should be buying $900-$1,400 in supplies from this one source.

2. What is the gross profit on this customer's business? If it is less than Savasta needs for profitable operation, is it likely that this customer is buying only those construction materials from Savasta's salesman that are inherently low gross items while he is buying his other supplies, the higher gross items, from another house.

3. How many transactions did the account require? The customer who bought $750 worth of supplies during the month, but did it through four deliveries and almost daily pickup at the counter, is in for action by Savasta and the salesman. Even if the account shows a good gross profit on its total volume, that profit is being dissipated in the warehouse and the accounting department.

4. How much service did the account require? If a low volume account is regularly calling Savasta Electric Supply for quotations, but seldom giving that house the order—if the salesman is being asked frequently to drop by and help with specifications, but much less often called to pick up the order—if it is an account which requires rush deliveries to each job out of proportion to the total volume because of inefficiency—then Savasta and his salesman will have to decide their future with this customer.

• **Acting on Low Volume Accounts**—Every account that is analyzed as above requires a separate decision and many factors—even hunches—may influence the action of Savasta and his salesmen. But in general here is what they do.

1. They may intensify their efforts to increase the business of a currently low-volume account by determining

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KEY TO COSTS AND PROFITS at Savasta Electric is this operation. Mary Ann Savasta (*right*) uses NRC #3200 to cost the sales information she is getting from Maura O'Brien to give owner Savasta a running record of regular sales, their cost; direct sales, their cost; gross profit plus a monthly compilation showing all this information by salesmen with their average gross profit.

Customer Profit Analysis (cont.)

what efforts would have a chance at success. Would more frequent calls be effective? Would a special presentation, a special promotion, or other attention have a chance to stimulate more volume? If so, plans are made.

Would a change of salesmen help? This is not an infrequent consideration. Savasta and his salesmen know that personality is involved in all sales work, that the same man makes friends in one concern and always clashes with the principals of another firm. When this is a possibility, accounts are switched within the Savasta organization.

2. They may decide to relieve the salesman of the low volume account if it shows no potential or is too costly to maintain. The customer then becomes a "house account." Such business that the account provides over the transom or across the counter will be taken as long as it comes, but the salesman will use his time for the development or service of customers with a profit potential.

3. They may try to cut the expense of handling the customer's business if it is consistently in the higher-gross bracket. Knowing the customer's failings—too many requests for quotations without following with orders, too frequent demands for rush delivery, spreading orders instead of consolidating them—the salesman can try diplomatically to correct or ease those problems. He may find that many contractors don't realize that what they are doing to the jobber is at the same time a costly and unnecessary use of the contractor's personnel. By guidance, these accounts may become less costly to handle. If they are stubborn or ignorant, then Savasta and the salesmen can still change them to house accounts.

• **Studying Low Profit Accounts —** In their analysis of each month's sales and gross profit by accounts, Savasta and his salesmen are alert to the accounts that, regardless of volume, consistently produce a gross profit less than that required by the house. This analysis has become more important since the salesmen's compensation is based on a percentage of gross profit rather than percentage of gross sales. In this study they consider:

1. That the account may have no potential for business that will give the distributor an adequate gross profit. Some contractors specializing in wiring low-priced tract homes could fit that category.

2. That the customer is not buying from Savasta Electric Supply those products which are profitable because the salesman is not doing an adequate job of selling the account.

3. That the account may require specialized help from a distributor's salesman and the Savasta representative has not been offering it or is not able to offer it.

4. That another distributor or salesman may have an "in" at this account because of a long period of serving it or through personal friendship. In that situation it may be likely that the other salesman is trying for and getting the higher gross business and not fighting his account when the customer shops elsewhere for the low gross business.

• **Improving Low Gross Accounts—** With the above analysis as a basis for action, Savasta and his salesmen have their choice at a variety of moves:

1. The account with little or no potential for producing more profitable business could become a house account. Then, with no salesman's commission or expenses to charge to the volume coming from that customer, Savasta might make a profit on it.

2. Most frequently, when the account shows potential for profit, an effort is made to improve the selling. The salesman may have been satisfied with his commission on the gross volume of a particular account, procured the volume by regular calls that involved little more than a cup of coffee, some griping about the Giants, and listening to the customer's woes.

With Savasta insisting, and with the salesman's income now based on his percentage of the gross profit, the man in the field will be more ready to sell up. He can start showing samples, spend more time studying the customer's needs and showing how he can help as well or better than another salesman. He can get his house involved through promotion, special meetings for the customer's staff and other long-proven distributor sales building techniques.

3. Another answer to the problem of getting more profit from a volume account is receiving much of Tom Savasta's attention now—that is the training of his sales force in San Carlos and San Jose to make them the type of specialists the big customers want, use and give orders to. The continued development of Savasta's market area as a center for highly-specialized manufacturing in the electronics and missiles field is increasing the need for specialized distributor's salesmen for both the industrial and large contractor accounts. This training program is not a general course because Savasta's men already have that knowledge. Instead it is an attempt to intensify the men's knowledge in those fields which are made evident by customers' demands for help.

Visits to suppliers when possible, but more often the setting up of product training sessions using the field engineers of the lines the house handles is serving to give the salesmen and inside staff this specialty training.

These various analyses of customers' volume and profit potentials are all possible at Savasta Electric Supply because the owner has the figures each month that show how the house is doing and how each salesman is making out with each account—but it isn't just possible, says Tom Savasta, it is necessary. "How a distributor can make a profit in today's market without costing his sales tickets and compiling the data to give him a means of determining where he is, where he isn't, and where he could be getting a profit, I don't know."

NEW HEADQUARTERS in old downtown Detroit gave Fife Electric Supply the idea for . . .

Making the Most Of a New House Opening

HOSTS AND GUESTS at second of ten open house receptions are (l. to r.) Ben Smith, v.p., Fife Electric; Marv Tisdale, sls. mgr., Fife; N. C. Warner, Westinghouse, Pittsburgh; Ray Whyte, pres., Ray Whyte Elec. Products; D. Lyle Fife, president, Fife, and J. D. Young, Westinghouse, Detroit.

TWICE in a lifetime an electrical distributor gets a chance at opening a brand new house to his employees, his customers, his friends—in and out of the trade—and the local citizenry.

How he handles this opportunity is important. He and his business—are judged by his approach to the new house-warming. It can elicit spontaneous approval, or dismal indifference. The reaction depends on the time and planning that are put into the opening.

Distributors across the country might take a leaf from the recent series of successful new house receptions planned and produced by the staff of Fife Electric Supply Co., Detroit, under the direction of D. Lyle Fife, president of the Motor City firm.

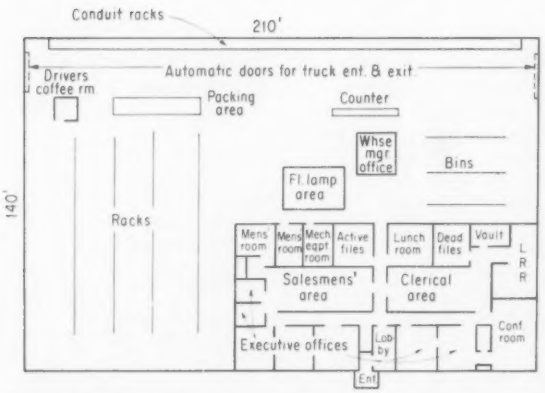
• **Everyone In the Act**—From the time in mid-1960, when the news was official, all Fife personnel were readying themselves for the big move to the newly redeveloped Corktown area, as evidence of "our faith in Detroit's continued industrial growth and future . . ." as president Fife put it.

CONTINUED

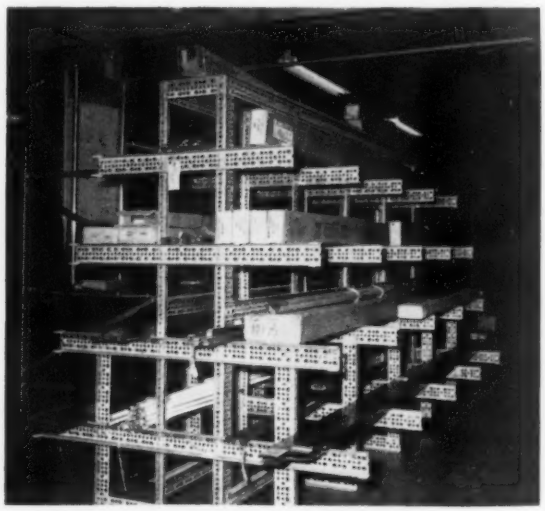
HOSPITALITY TABLES, like this one, enhanced each of the series of openings. Product displays (background) surrounded reception area in center of 29,400-sq ft house.

OLD FRIENDS, such as Frank O'Toole, president of electrical contracting firm, F. J. O'Toole Co. were escorted by Lyle Fife. Mr. O'Toole was at first opening 33 years ago.

VAST STOCK of conduit in Fife warehouse is stored against length of 210-ft long rear wall. Trucks drive in one door (*see layout, below*) and out at far end. Rail for chain hoists runs between fixtures in drive-through area.



FLOOR PLAN (*above*) shows functionalism of Fife's new house. Personnel extras: office workers have attractive lunchroom, warehousemen have own washroom-dressingroom with lockers. Visiting truck drivers have own coffee room. Metal shelving (*right*) is used for storage and demonstration.



Fife's New House (cont.)

The firm had considered moving for more than five years but hesitated because relocation for many Detroit distributors had meant remoteness and consequent dropping of long-time downtown customers. When Mayor Miriani's revitalization and redevelopment program for downtown Detroit came along, it was a natural for Fife. "Inventory, servicing and delivery problems dictated that we should move—without inconveniencing accounts," explains vice president Ben Smith.

- **Step-By-Step**—The actual moving to the new 29,400-sq ft house was done as gradually—and as smoothly—as was possible. In the first week of January, on a Monday morning, the new house was operative and fully ready.

Next came the plans for the openings. Ten were scheduled. Their dates, and the people invited:

- **Jan. 26th**—Employees, stockholders and the board of directors.
- **Jan. 31st**—City of Detroit officials and Public Lighting Commission.
- **Feb. 3rd**—Top executives of industrial accounts, contracting accounts and wives.
- **Feb. 6th**—Detroit Edison, Tigers, Red Wings, Lions, banking executives and manufacturer-suppliers.
- **Feb. 8th, 10th, 13th, 15th, 17th and 20th**— Various accounts and manufacturer-suppliers.
- **Taste and 'Tention to Details**—Each of Fife's ten open house receptions were identical in their warmth.

OVERHEAD hoists make heavy loading and unloading comparatively easy.

LOTS OF ROOM to work and expand in is important feature of new house. Wide aisles and metal shelves are in 65 ftc of high efficiency lighting.

KEY POSITION of warehouse manager Dan Lemelin on raised, glass-enclosed platform enables him to supervise from center of plant. Two mirrors give him views of automatic entrance and exit doors which he controls.

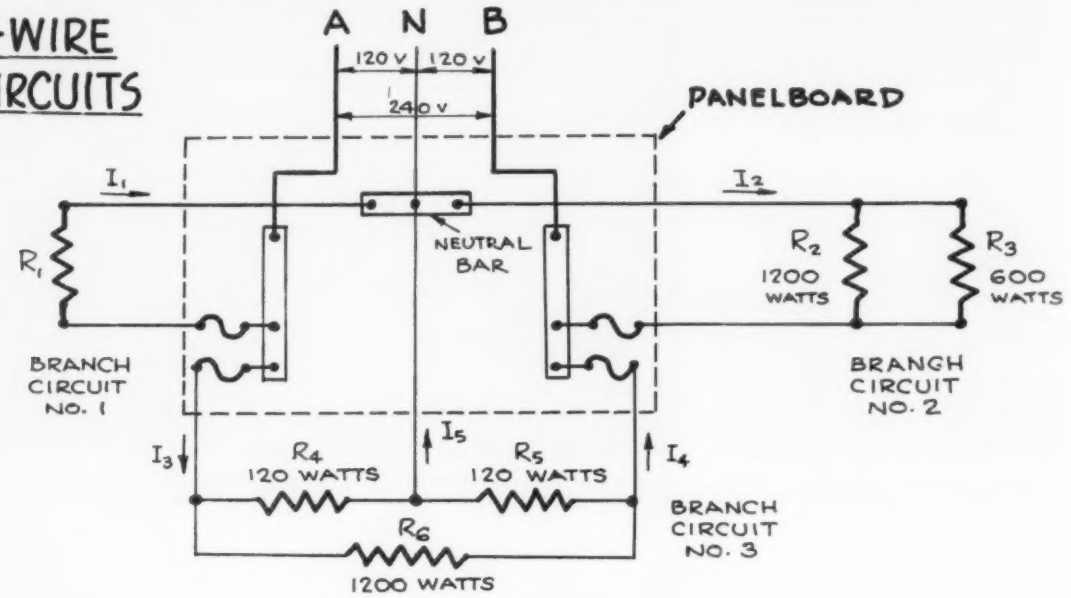
POWER-PLUS for entire air-conditioned 29,400-sq ft house is supplied by free-standing switchboard fed with 1200-amp duct with service head that protrudes through wall. Here, Fife salesman Allen Higgins (*right*) and George H. Smith, Smith Bros. Electric, Inc., look over board which was built in two sections and has no main switch. Six circuit subdivision rule allows up to six main circuits. Mr. Smith supervised entire installation, personally.

Guests were met at the doors and conducted by Fife personnel into the office area, conference room and finally, the warehouse for a tour of the company's well-stocked shelves and equally well-stocked hospitality tables.

In addition, each guest was given an opportunity to guess the number of connectors in a goldfish bowl for valuable prizes. Each connector represented one product carried by Fife Electric Supply—totaling 14,821 in all.

• **Mission Accomplished**—Reaction of visitors to the new house was excellent, says president Fife. "We got our story across in a planned and efficient way to our customers and to our manufacturers. They can count on our full-functioning service."

3-WIRE CIRCUITS



Illustrated is a panelboard fed by a 3-wire, 120/240-volt feeder. Three branch circuits are shown; Circuits No. 1 and 2 are 2-wire circuits; No. 3 is a 3-wire circuit.

(1) *If the current I_1 in Circuit No. 1 is 12 amps, what is the wattage of load R_1? (Neglect voltage drop.)*

R_1 = 120 VOLTS × 12 AMPS = 1440 WATTS

(2) *What is the current I_2 in Circuit No. 2?*

CURRENT IN R_2 = $\frac{1200 \text{ WATTS}}{120 \text{ VOLTS}}$ = 10 AMPS

CURRENT IN R_3 = $\frac{600 \text{ WATTS}}{120 \text{ VOLTS}}$ = 5 AMPS

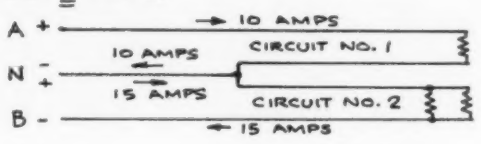
I_2 = 10 + 5 = 15 AMPS

(3) *What current flows in feeder conductors A, B and N if Circuits No. 1 and 2 are energized and Circuit No. 3 deenergized?*

CURRENT IN "A" = I_1 = 10 AMPS

CURRENT IN "B" = I_2 = 15 AMPS

THESE TWO CURRENTS OPPOSE EACH OTHER IN THE NEUTRAL, AS SHOWN IN THE FOLLOWING DIAGRAM; 10 AMPS FLOW IN ONE DIRECTION, 15 AMPS IN THE OTHER. THE NET CURRENT IN "N" IS THUS 15 − 10 OR 5 AMPS.



(4) *In Circuit No. 3, R_4 and R_5 are 120-volt loads; R_6 is a 240-volt load. Find I_3, I_4 and I_5.*

CURRENT IN R_4 & R_5 = $\frac{120 \text{ WATTS}}{120 \text{ VOLTS}}$ = 1 AMP

CURRENT IN R_6 = $\frac{1200 \text{ WATTS}}{240 \text{ VOLTS}}$ = 5 AMPS

I_3 = 1+5 = 6 AMPS = I_4 I_5 = 0, SINCE I_3 = I_4

(5) *If R_4 is turned off, find currents I_3, I_4 and I_5.*

CURRENT IN R_4 = 0

CURRENT IN R_5 = 1 AMP

CURRENT IN R_6 = 5 AMPS

I_3 = 0+5 = 5 AMPS I_4 = 1+5 = 6 AMPS

I_5 = 6 − 5 = 1 AMP

Pinpoints the Information You Need on . . .

Basic Circuit Study

By J. F. McPartland And W. J. Novak

ALL of the foregoing principles and characteristics of electric current flow apply to direct-current and alternating-current circuits.

There are additional principles and characteristics which apply only to alternating-current circuits. These will be covered later. So far, the theory of electricity can be correlated to practical circuits and application as follows:

Voltage Source—For the vast majority of buildings, the source of voltage which powers the entire interior distribution system is the service from the electric utility company. This is simply connection to the end of a feeder from the utility company's generator.

In some cases, the source of voltage for a building may be a generator right on the premises. And there are many cases in commercial and industrial application where a segment of a building's system is supplied from a small generator or from a dc source such as a bank of batteries or a rectifier. This latter case covers special needs for voltage different from the basic system voltage or needs for emergency sources of power in the event of failure of normal power.

Conductors — Connection from the service conductors of a building to the various load devices is made by a simple or complex network—depending upon the size and type of building and loads—of wires and cables of varying sizes and constructions. From the utility terminals to the main switch or main switchboard, the conductors are the service entrance conductors.

From the main switchboard to each panelboard in the building, two or more conductors provide a circuit known as a feeder, to deliver power to the circuits of the panel. A feeder from a panelboard to another panelboard is commonly called a subfeeder. Then conductors which run from a panelboard to motors, lighting fixtures or plug outlets make up the branch circuits of the system.

Each of the conductors throughout the entire system has sufficient cross-section area to carry the current impressed upon it—without producing heat of I^2R which might damage the insulation on the conductor and without producing so much voltage drop by current flow through the resistance of the conductor (drop I R) that the voltage delivered to the load devices is objectionably low. In practice, voltage drops are generally held to no more than 5% of the nominal system voltage. A widely used approach to voltage drop holds the drop to about 1% for supply to lighting loads and 3% for circuits to motor loads.

Load Devices—These are the utilization devices for which the entire electrical system is installed in the building. Each lighting and heating device is designed to operate at a nameplate voltage which will produce a certain current flow through the device, depending upon the resistance of the device. Fluorescent and mercury vapor lamps use coil type ballasts which oppose alternating current flow by the resistance of the wire in the coil and by an alternating current characteristic known as inductive reactance. Motors, both ac and dc, have resistance to oppose current flow, and ac motors have inductive reactance.

Three-Wire Circuits

The basic circuit referred to thus far has been the two-wire circuit to a lamp or other load device. And it has been shown that this same circuit may be used to supply a number of lamps connected in parallel—the usual method of load connection in modern electrical systems. Then, too, the same circuit of only two wires can be used to provide the feeder to the panelboard from which the two-wire branch circuits are derived. And the basic two-wire circuit used over the past years has been the 120-volt circuit to supply the very many load devices designed for that voltage.

The three-wire circuit was developed to reduce the problems of voltage drop and power loss in the lines, while still providing for supply to 120-volt circuits. In the two-wire circuit, increase in the size of the circuit conductors reduces the resistance of the line and thereby decreases voltage drop and power losses. But this is the only thing that can be done for improving two-wire circuits. However, the use of higher voltage offers the chance to deliver a given amount of power at lower current than would be required for the same power at 120 volts, i. e., because power equals E x I, the current is less at the higher voltage. And, as a result, the voltage drop and power loss in the circuit conductors will be lower.

But use of the higher voltage for a two-wire circuit does not meet the need for supplying 120-volt loads. The three-wire circuit, which consists of two wires with 240 volts between them and 120 volts between each of these wires and a third wire, provides the advantages of reduced voltage drop and power loss, with ability to serve 240-volt load devices and without sacrifice in the ability to supply 120-volt loads. Such a circuit is commonly described as a 120/240-volt, three-wire circuit and may be used for direct current or alternating current.

In the three-wire circuit, the conductor which forms a 120-volt circuit with either of the other two wires is called a neutral conductor and is generally required by electrical codes to be grounded (this matter of grounding will be discussed later). When the load resistance on one of the 120-volt circuits is equal to the load resistance on the other 120-volt circuit, the neutral conductor carries no current and the other two wires carry the same current. In effect, the two load resistances are connected in series across the 240-volt circuit of the non-neutral conductors. The total power supplied is equal to 240 times the current flowing.

The voltage drop and line power loss under these conditions are the same as they would be for a 120-volt circuit of the same size wires, carrying the same current and supplying only half the power. Thus for a given load on each of the 120-volt circuits, the voltage drop and power loss for each 120-volt circuit are only one-half of what they would be for a simple two-wire 120-volt circuit serving the same load as each of the other two 120-volt circuits. And when the load resistance on each of the two 120-volt circuits of a 120/240-volt three-wire circuit is not the same, the neutral wire carries the difference between the currents flowing in the non-neutrals.

Next Month: Magnetism

Profit Is Not a Dirty Word

With wit and candor, a manufacturers' agent makes a case for making money. While he doubts "that anybody in the electrical industry really holds profit in contempt," he believes "there are those who have little respect for it."

By Paul E. Bowers*

THE CONTEMPT with which Fellow Travelers, and the equally stupid, utter the word profit might lead one to believe it is a four-letter word and not one of six letters.

There is no stigma attached to making a profit, and no intelligent person ever disparages profits for the simple reason that everything we have is paid for with profits, whether those profits are from the manufacture and sale of goods or the return for one's labor and/or abilities. The Pay Envelope and the Dividend Check are in the same category—both are profits. Every function of government depends on profit because there is no such thing as government funds, local state or national; there are only taxes of which the sole source is profit. I always wonder if the sophists, who sneer at profit, learned even the most elementary mathematics or whether their respective boards of education had to burn down all the schools to get them out of the first grade.

Too many people with whom I have talked have stated their 1960 sales were slightly less, about the same or more compared with 1959 volume, but the profit was less in percentage and dollars and cents. Some even took pride in the fact that their volume increased, at less profit, and did not give thought to the fact that their seeking large volume, without regard for profit, contributed to the decrease in profit throughout their industry.

One stated, "We didn't make any money, but we're growing." I mentioned the company that grew and grew, without profits in mind, and finally grew so big that all of their assets were tied up in debts. The volume-valuer looked at me as though I were headed for the funny farm. I won't argue this point, but if I am on the way to a padded cell, somebody's profits keep that place going, too.

Large volume is not a sin, by any means, and those who criticize corporations solely because they are big were still in kindergarten when those schools were burned down. A certain volume is necessary to any business, but when management seeks volume for the sole purpose of being one of the "Big Boys" and ignores profits, that company is headed for trouble and causes trouble all through their industry. Do all the volume you can and grow as big as you wish, but make a profit.

I always hesitate to mention the past because some bright, progressive (?) person usually says, "I'm not interested in the past; I am only interested in the future." Certainly, there is nothing to be gained in living in the past, but those who will not learn from the past are far from bright or progressive since everything they are and everything they have are strictly the end-products of the past.

Not too long ago, an article in Business Week was headlined, "Management Disturbed by Large Volume at Low Profit." Many of you may recall similar statements preceding the Great Depression, and I wonder if the management in question has a short memory, can't read or is only interested in the future; without profit there is little future in which to be interested.

I doubt that anybody in the electrical industry really holds profit in contempt, but it would seem there are those who have little respect for it. The old gag about "making up on the bananas what you lose on the peanuts" is too near the truth, in too many cases, to be funny. It is very simple to explain that the reason for declining profits in the industry is selling at too low prices, but the explanation of *why* material is sold at these prices is far from simple. In fact, some cases are impossible to explain.

For example, a certain (or maybe "uncertain" would be a better word) manufacturer's material was specified, outright, on a job. Some of the component parts were purchased and installed, but when the parts for completion were ordered, the manufacturer cut the price seven-and-a-half percent. Even the worst of "substitutors" could not have competed with him, but he quoted the job as though every other manufacturer were quoting. Certainly, it is his own business if he wants to give his money away—but let none take him seriously when he complains of low profits. The Pajama Game song was, "Seven-and-a-half cents doesn't make a hell of a lot"; in this case, "Seven-and-a-half percent didn't make a hell of a lot of sense."

A remote case? Not at all—he did the very same thing on a job on which the additional fixtures had to match the existing fixtures which were his very own. I have heard this manufacturer complain about competition; maybe he should look in the mirror.

Let us consider the case of distributors fighting over an order. A manufacturer will spend time and effort to sell a certain application of his material. Appropriations for the job will be based on the manufacturer's resale prices, but when the purchasing department sends out the inquiry, the distributors' quotations make the manufacturer's man look as if he didn't know the prices of his own material.

I have seen this happen when only two distributors were involved and, although I have been in this business for 38 years and am not particularly amazed at anything, there are times when some things confuse me, and this is one of those things. Do the wholesalers quote this way just to keep the other fellow from getting the order? Taking an order on that basis can be like stealing his wife—a real expensive deal! Do they do this because of the size of the order? None of us is immune to being impressed with the size of an order, but a big order, without profit, can be like a hang-over—all the fun is in getting it.

Continued on page 152

*Mr. Bowers, a manufacturers' agent in Buffalo, N.Y., is not a newcomer to EW's pages. A letter of his appeared in the August 1960 issue (p.7) and an article—"The Case Against the Direct Sellers"—in the October 1960 issue (p.20).

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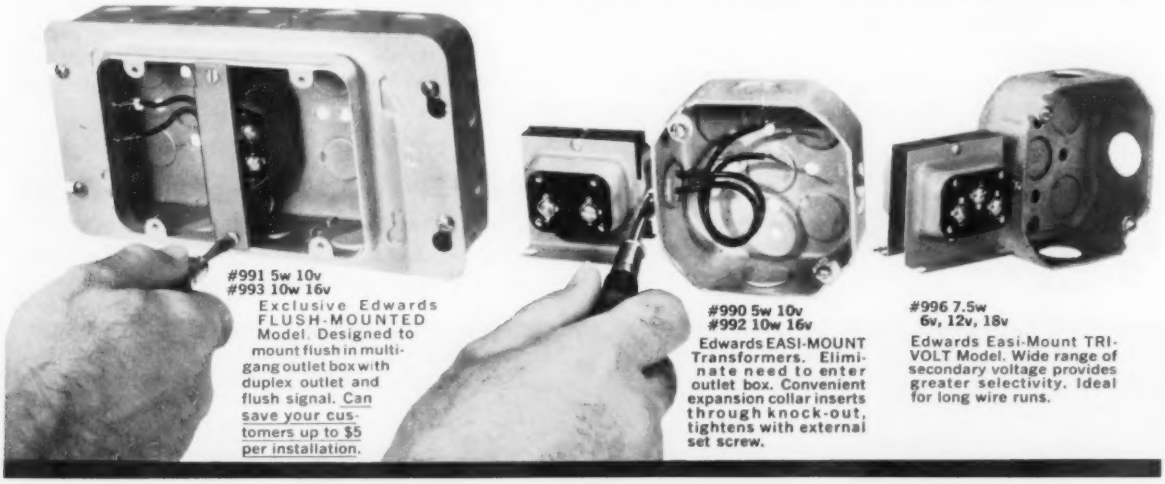

#991 5w 10v
#993 10w 16v
Exclusive Edwards FLUSH-MOUNTED Model. Designed to mount flush in multi-gang outlet box with duplex outlet and flush signal. Can save your customers up to $5 per installation.

#990 5w 10v
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Bare Annealed Copper
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And to back your selling effort, Okonite has prepared a new, four-page folder containing complete technical information on P-30 and its various applications. For your copy of Bulletin 1140 and information on how you can benefit by selling Okonite P-30, write to The Okonite Company, Subsidiary of Kennecott Copper Corporation, Dept. W., Passaic, New Jersey. 7805

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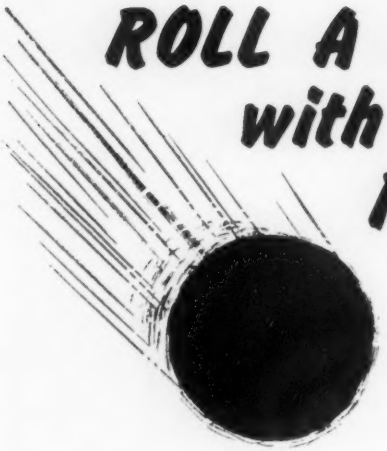
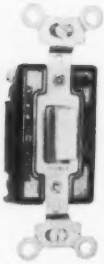
OKONITE CABLE

ROLL A PERFECT SCORE with the RODALE QUALITY LINE



624 DUPLEX FLUSH RECEPTACLE
With plaster ear strap.
(No. 625 has standard ear strap).
Rating: 15A-125V
Colors: 624 Brown or ivory

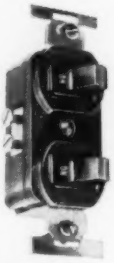


422 FAMOUS TOUCHETTE SWITCH
Rating: 15A-120-277V (A.C. only).
Unparalleled feather-light action.

471 DUPLEX SINGLE POLE SWITCH. Each switch rated 10A-125V "T," 5A-250V. Switches independent of each other. Brown or ivory

630 FLUSH TOGGLE SWITCH
Single pole, standard strap—Bakelite base. Rating: 5A-250V. 10A-125V.

470 SINGLE POLE SWITCH AND "T" SLOT RECEPTACLE
Switch rated 10A-125V "T", 5A-250V. Receptacle rated 15A-125V. Brown or ivory



572 3-WIRE DUPLEX RECEPTACLE
Rating: 15A-125V. Plaster ear straps. Superior quality meeting highest standards. 872—spec. grade.

1026 ARMORED ATTACHMENT CAPS
Metal cord clamp.
Rating: 10A-250V 15A-125V.

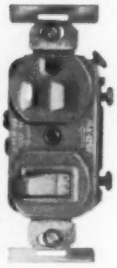
2100 ARMORED BAKELITE CONNECTOR BODY
With metal cord clamp.
Rating: 10A-250V 15A-125V.

1236 ARMORED ATTACHMENT CAP
Metal cord clamp.
Rating: 20A-250V.
10A-600V (AC).

3200 ARMORED BAKELITE CONNECTOR BODY
Metal cord clamp.
Rating: 20A-250V.
10A-600V (AC).

5521 SILENT MERCURY SWITCH
10A-125V T-rating and 15A-120V AC rating. IDEAL for heavy duty installation. Top wired.
Meets Federal and REA specifications.

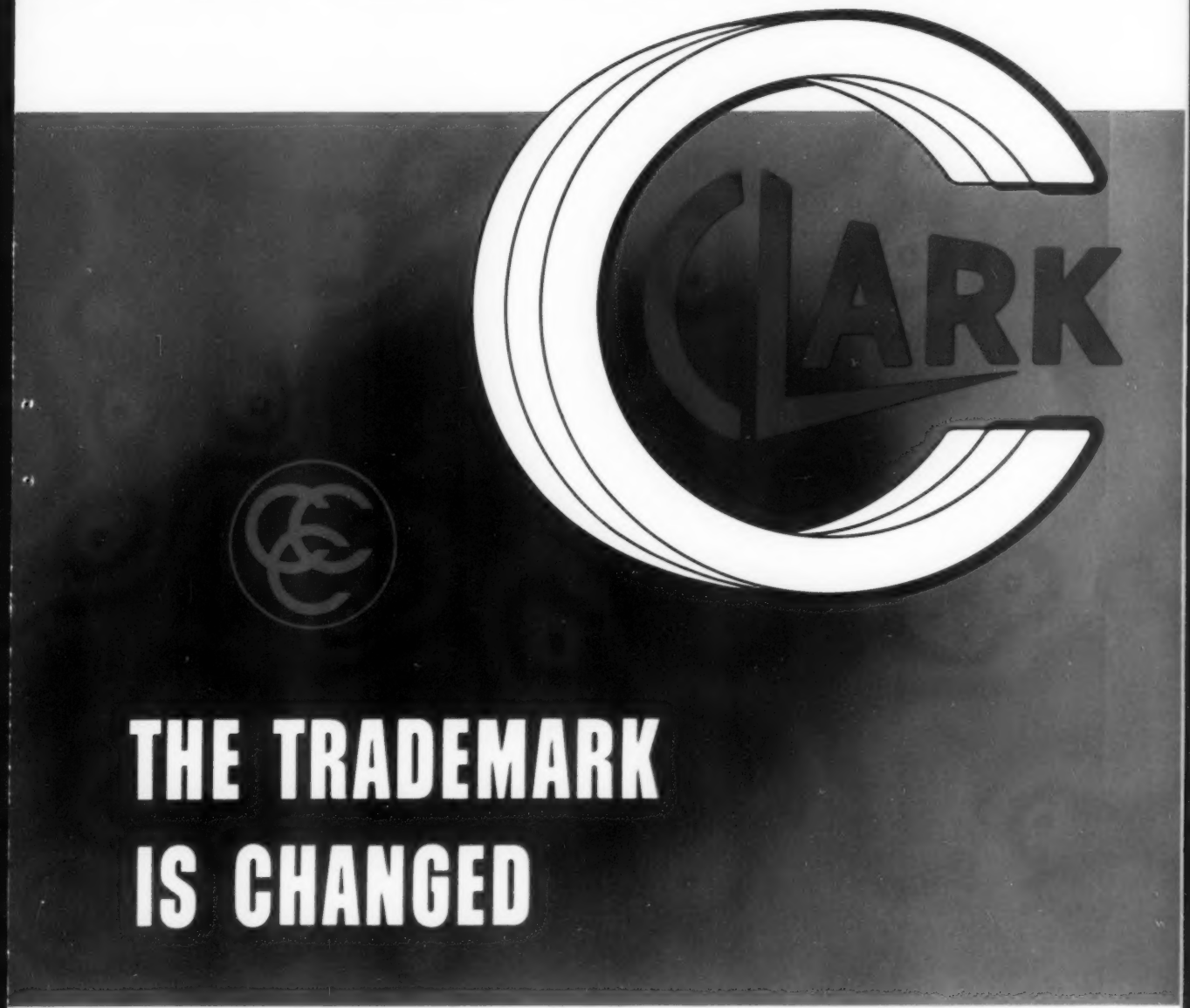
473 SINGLE POLE SWITCH & U GROUND RECEPTACLE
Switch Rating: 10A-125V "T" 5A-250V.
Receptacle Rating: 15A-125V



NOTE: All Products are UL Listed

Rodale offers you the perfect combination in wiring devices—Quality and EXTRA Value. This Quality-EXTRA Value combination is the reason why Rodale wiring devices are receiving such wide acceptance. With the Rodale line you can be sure of satisfied customers *and* satisfactory profits.

Rodale MANUFACTURING CO., INC., EMMAUS, PA.

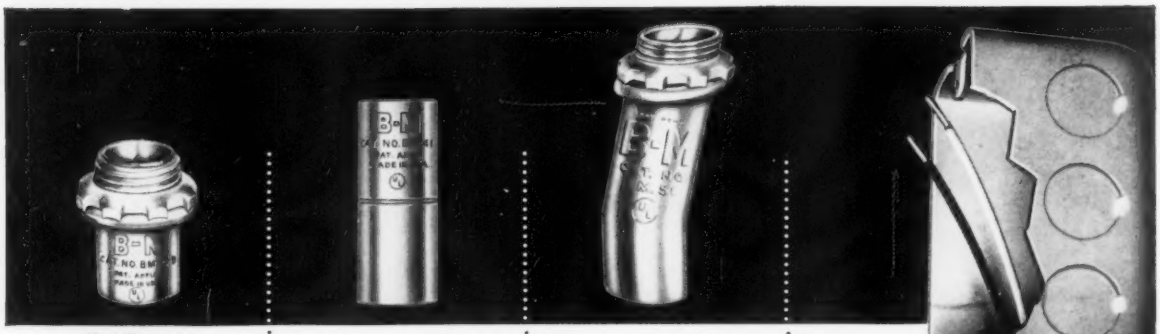


THE TRADEMARK IS CHANGED

...to match the high performance standards of the nation's top-quality electrical control equipment

Soon you will see this new trademark on Clark control devices and systems. Behind this symbol are the precise engineering and exacting production methods which make possible the high standards of quality for which Clark is famed. Behind it are men with the know-how to create the longest lived, sturdiest, most efficient electrical controls. Behind it are answers to your needs for everything from standard equipment such as motor starters, relays and push buttons to complete engineered systems.

For help in solving your control problems, contact your local Clark distributor or district sales office, or write direct. *The Clark Controller Company* • Main Plant: Cleveland 10, O.—Western Plant: Los Angeles 58, California—In Canada: Canadian Controllers, Limited, Toronto, Ont.



Red Throat
BM-21B
½" Connector
BM-22B
¾" Connector
BM-23B
1" Connector

BM-41
½" Coupling
BM-42
¾" Coupling
BM-43
1" Coupling

BM-51
½" Offset Connector
BM-52
¾" Offset Connector

BM Offset Connectors showing how wires are guided over box edge.

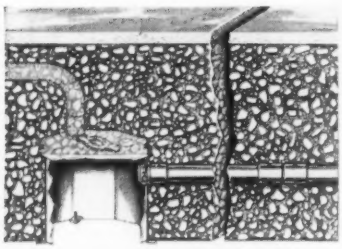
FOR MORE PROFITS

Save time and money with

B-M ORIGINAL INDENTER FITTINGS

Here is the combination that is unbeatable when it comes to easier E.M.T. installation at less cost. New lightweight plier size indenters make setting up thin wall conduit a breeze. B-M fittings are neater too! No unsightly nuts or projecting set screws.

A few more of the plus features of B-M fittings are Concrete tight—Vibration resistant—Extra heavy bright zinc plate, salt spray and acid drip tested for corrosion resistance—Extra heavy positive bonding locknuts—smooth rounded edges or bushed throat type connectors that prevent insulation damage—All steel construction with extra heavy gauge wall thickness.



ALL BRIEGEL FITTINGS ARE U. L. APPROVED AS CONCRETE-TIGHT

When setting E.M.T. in concrete you can make each job easier and more profitable by using Briegel All Steel Indenter Fittings that have UL approval as Concrete-Tight. Contractors everywhere recognize their cost cutting qualities and the fact that they make each wiring job a better job. It is only natural that Briegel Fittings are the most widely used E.M.T. connectors and couplings.

BM PLIER SIZE INDENTERS
BM—No. 607 ½"
BM—No. 608 ¾"
BM—No. 609 1"

All B-M indenter type fittings far exceed the requirements of U. L. file card E 10863 and Federal Specifications W-F-406.

BRIEGEL METHOD TOOL CO.
GALVA • ILLINOIS

USED THE MOST FROM COAST TO COAST

BUSINESS INDEX for JANUARY 1961*

	SALES —(% Change)—		INVENTORY —(% Change)—	
	From Jan. '60	From Dec. '60	From Jan. '60	From Dec. '60
NATION	0	—19	— 3	+1
NEW ENGLAND	(X)	(X)	(X)	(X)
MIDDLE ATLANTIC	— 3	— 9	+ 3	+2
EAST NORTH CENTRAL	+ 1	—22	— 5	+3
WEST NORTH CENTRAL	+ 5	—25	— 2	—1
SOUTH ATLANTIC	+ 1	—22	— 2	0
EAST SOUTH CENTRAL	+12	—19	+11	+5
WEST SOUTH CENTRAL	+ 7	— 4	— 8	0
MOUNTAIN	(X)	(X)	(X)	(X)
PACIFIC	— 6	—16	— 4	—2

*For electrical apparatus, supplies distributors; Source: Bureau of Census. (X indicates figures unavailable)

The New Bulletin 709

Greatest advance in motor control in 30 years

PLUS VALUES OF THESE NEW STARTERS

- smaller size
- greater interrupting capacity
- even more millions of trouble free operations
- more wiring room
- elegant styling
- A-B "quality" throughout

a complete new line of Bulletin 709 motor starters

Thirty years of experience have gone into the design of this new Allen-Bradley line of motor starters. While retaining the simple solenoid principle—with only ONE moving part—these Bulletin 709 starters are *completely new in every way.*

They are amazingly smaller—especially in the higher ratings. Yet test after test proved they will outlast any starter now on the market *by many times!*

The new, patented, high-efficiency magnet—remarkably powerful for its size and weight—is cushioned to reduce shock and wear. The new molded coils are protected against damage and harmful atmospheres. The new, precision hot molded arc hoods confine the arc and increase interrupting capacity.

New weld-resistant, cadmium oxide silver contacts close and seat firmly—without wear-causing motion. The new overload relays are not only *trip-free* but also *tamperproof*—but the "heaters" remain unchanged. The smart, new cabinets—by Brooks Stevens—are an asset on any type of installation. Better write for full details on this revolutionary new "family" of Bulletin 709 *quality* motor starters.

ALLEN-BRADLEY

Member of NEMA

Quality Motor Control

Allen-Bradley Co., 106 W. Greenfield Ave., Milwaukee 4, Wis.

CONFEREES look at winning entries in the seventh annual Look Magazine Residential Wiring Award competition. Thirteen awards went to companies in four categories: distributors, contractors, utilities and electrical leagues and wiring bureaus. In the distributor classification, Farrell-Argast Electric Co., Indianapolis, won first place. A citation went to Howland Electric Wholesale Co., El Monte, Calif. for honorable mention.

Ideas Exchanged At Wiring Conference

Open forums on residential and commercial wiring modernization promotions and on Medallion Home sales potential are features at annual wiring sales conference.

MANY informative discussions and interchanges of views and ideas regarding the commercial, industrial and residential wiring market were presented February 23rd and 24th in Chicago at the 17th annual National Wiring Sales Conference.

About 200 persons connected with the electrical industry attended the two-day meeting sponsored by the National Wiring Bureau.

• **A Realistic View**—In one of the high-lights of the conference, Harold A. Webster, president of the National Electrical Contractors' Association, stressed that every wiring installation in the United States that is more than 10 years old is completely out of date.

"The electrical contractors can furnish, install and guarantee the entire electrical job," he said. "We are at the point of sale on the customer's premises more than any other member of the industry team. And, thus, we have the greatest sales opportunity.

"For years we have heard our fellow team members cry that electrical contractors are not sales-minded—that they would rather bid a job than sell it—that they sell a job down rather than up. Electrical contractors are doing a lot more selling than most of us realize. I believe every responsible electrical contractor is aware of the growing demands being made on our industry, and in varying degrees is trying to sell installations geared to accept future growth."

• **Help Needed** — Contractors need help from other members of the industry for total success electrically, Webster added.

"Our biggest problem is how to stimulate and motivate contractors to become more interested in selling. Here is where we need help. We need cooperation from our fellow teammates to help motivate the electrical contractor to do some selling himself.

"We have a wonderful product to sell to our customers—a product whose benefits make their lives fuller and richer. Let's sell ourselves first on the benefits of living better electrically; and then let's work together as a team to sell the public."

• **Cooperation**—This same theme was continued by William N. Collins of Collins Electrical Construction Co., St. Paul, Minn., who emphasized that all segments of the electrical industry must begin to work together to sell the use of electricity in two ways: first, in a manner where that use is converted into profits for customers, and second, in a manner that returns a fair profit to the electrical industry.

"One thing we must keep in mind is this: If more contractors would think in terms of profits than of themselves as prophets, just think how wonderful this electrical industry would be. You can sell a lousy job," he continued, "at a cheap price and end up a heel in the eyes of your customer; or you can sell a good job at a fair price and be a hero. Now, which do you want?"

• **Individual Importance**—To be successful, sales must be made on Main Street, Edwin O. George, vice-president of The Detroit Edison Co., indicated.

"Any program for living better electrically must be supported on the local level and stimulated by national advertising. Even though our methods may be different, the objectives of all members of the industry are the same: increased business and profits."

Forums included discussions on residential wiring modernization promotions, commercial wiring modernization promotions and Medallion Home sales potentials.

For awards in the merchandising achievement classification for electrical distributors, Farrell-Argast Electric Co. of Indianapolis, Ind., was named as the outstanding promoter of adequate wiring. In the same category, a special citation went to Howland Electric Wholesale Co., El Monte, Calif.

Detroit Set For NAED Meet

Distributors will dig Detroit for dizzy doings after conference meetings. "Motor City" has welcome mat out for NAEDers attending 53rd annual convention.

A glance at this map will show why Detroit is often referred to as the city of "squares." This is no reflection upon its population, merely a description of its topographical layout. Michigan Ave. is considered the main "drag" of the Motor City. Actually, there are no streets that run parallel to it, so if any of you NAEDers get lost, just head for Michigan Ave. and you're "home".

FOR the second consecutive year, NAED members have the privilege of attending the national convention in a "Big D" city. Detroit, sometimes called "Big D North," is more often referred to as the "Motor City." Notably, because it turns out more automobiles than any other city on the globe. If you take a map of Michigan and draw an 85-mile circle around Detroit, it will contain the home plants of the companies that make 9 out of 10 American automobiles.

Without a doubt, distributors arriving in Detroit for the 53rd Annual NAED National Convention will receive a warm welcome, and chances are the weather will be fairly warm and spring-like. The average temperature for the Motor City in May is about 58 deg F. But during the evenings, temperatures range from about 48 to 52 deg F, which is a little cool, particularly for distributors who will be coming from the South. Suitable wearing apparel for this region would include a light topcoat, Spring suit, light sport jacket and trousers, in any combination preferred.

NAEDers will have the privilege of convening in one of the nation's most modern convention arenas — Cobo Hall. The convention officially starts on Saturday, April 29th, at 9 a.m. with the first of several meetings of NAED commodity committees which will continue throughout the day. Convention registration also starts on that day, from 1:00 p.m. to 5:00 p.m. in the Sheraton-Cadillac Hotel. Convention registration continues on Sunday, Monday and Tuesday—April 30, May 1 and May 2—at Cobo Hall.

Room reservations for the convention are handled by the NAED Housing Bureau, c/o Detroit Convention and Tourist Bureau, 626 Book Building, Detroit 26, Mich.

• **Time Out**—Since Detroit is the automobile capital of the world, it can go without saying that it takes "wheels" to get around in this city. And for those distributors who are fortunate enough to have their own set of wheels, it may meet with your pleasure to use the convenient Detroit-Windsor Tunnel for a visit to Canada.

The panel on **Industrial Electronics** originally scheduled for Wednesday morning, May 3rd, has been re-scheduled for:
SATURDAY—April 29, 1961 in the CRYSTAL BALLROOM OF THE SHERATON-CADILLAC HOTEL, starting at 3 P.M.

We're proud that

THESE PRODUCTS

and

all others of

STEEL CITY

are distributed

by most members

of

N.A.E.D.

and other

qualified

electrical

distributors too

series '88' FLOOR BOXES

Completely NEW Line from Steel City!

with these valuable sales features

- Durable Bronze Adjusting Ring and Floor Plates with matching Bronze Service Fittings
- 1½" or 2⅛" deep 4" Octagon Outlet Boxes and Box Covers—electrogalvanized
- Screw-leg brackets welded to bottom of box for rigid mounting and positive leveling
- Holes in bracket legs for nail or sheet metal screw anchoring. Outlet box cover holes for tie-down wires.
- Outlet boxes with KO's for ½", ¾" or 1" conduits

Plus!...

- Assembled for quickest on-the-job installation
- Wide hand hole opening for easy access to wiring
- True level in rough and finish installation
- Accepts variety of flush or standpipe service fittings
- Packaged in individual cartons, clearly labeled
- Economically priced

SOLD ONLY THROUGH LEADING ELECTRICAL DISTRIBUTORS

STEEL CITY ELECTRIC COMPANY

PITTSBURGH 33, PA.

NOW AVAILABLE
FOR EXTRA SALES AND PROFITS
4-WAY
TOUCH-A-MATIC QUIET SWITCH

AN E-Z WIRE® DEVICE
Pat. No. 2,743,330

15 AMPS.
120-277 VOLTS AC ONLY

NO. 244B BROWN
NO. 244V IVORY

ALSO IN INTERCHANGE TYPE

EAGLE
PERFECTION IS NOT AN ACCIDENT

MEETS FED. SPECS.

THE SWITCH WITH ALL THE ADVANTAGES

SURE-TIGHT E-Z WIRE® PRESSURE TERMINALS

FEATHERTOUCH INSTANT ACTION

ROCK IT—PUSH IT TOUCH-IT

PACKAGED IN CELLOPHANE-WRAPPED EAGLE SHO-PAK®

- In both Flush Type with Plaster Ears, #244B & V (above), and in Interchange Type (No. 949B, Brown; No. 949V, Ivory).
- Sure-tight, enclosed E-Z WIRE® Pressure Terminals in rear guarantee speedy, profitable installations—even in tight spots. Just strip wires, push into the pressure terminals for insured connections. To release, press down in slot with screwdriver.
- Prevents haphazard Wiring connections.
- TOUCH-A-MATICS are compact. Install in any position.
- TOUCH-A-MATICS take standard wall plates.
- TOUCH-A-MATICS are recommended by Architects, Contractors, Consulting Engineers.
- TOUCH-A-MATICS are equipped with plaster ears, wire strip gage, self-tapping mounting screws captive on strap. Flush type TOUCH-A-MATICS individually packaged in Cellophane-Wrapped Eagle "SHO-PAK®."
- TOUCH-A-MATICS are also available in single pole and 3-way, Flush and Interchange Types, in 15 Amps and 20 Amps, 120-277 Volts AC only.
- *TOUCH-A-MATICS meet Fed. Specs. and are listed by UNDERWRITERS' LABORATORIES.*

See us at the NAED CONV., Hotel Statler-Hilton, Detroit and MIDWEST ELECTRICAL INDUSTRY & LIGHTING EXPOSITION, Booths 243-5-7, Chicago.

EAGLE ELECTRIC MFG. CO., INC.
LONG ISLAND CITY 1, NEW YORK
"PERFECTION IS NOT AN ACCIDENT"

Detroit . . .

Continued from page 138

Incidentally, Detroit is the only major city in the U.S. from which you must enter Canada by going south. Upon entering Windsor, Ontario, you will be welcomed by Canadian officials, who will merely ask you your name and where you reside in the United States.

However, a driver's license is good proof of American citizenship, if the situation requires. No passports or visas are needed.

Restaurant Guide

Restaurants . . . Downtown (Lunch, Dinner, and Bar, unless otherwise noted)

London Chop House: 153 W. Congress
One of the top 10 restaurants in the country. Detroit's only one so listed by *HOLIDAY* and others. Reservations essential. Above average prices, A la Carte menu. Beef in all its forms a specialty, but top gourmet quality throughout the extensive menu. Dancing evenings.

Caucus Club: 150 W. Congress in Penobscot Building.
Famous for 24 varieties of king size sandwiches unobtainable anywhere else. A fine bar that has spawned more than its share of nationally ordered exotic drinks. Fairly expensive. Reservations necessary at noon. Soft music at night.

Ponchartrain Wine Cellars: 234 West Larned.
Thoroughly and genuinely French, both in decor and cuisine. Food is served with vintage wines; you have to fight for a glass of water. No liquor. Quite reasonable.

Richelieu's: 1033 Washington Blvd.
Attractive intimate atmosphere with good food in the middle price range. Hospitable; good service. Trio performs most evenings for dancing.

Eastman's Gaslight: 441 Grand River
No relation to key clubs in Chicago, etc., but stands on its own merit for good food. Victorian atmosphere and American cooking.

Knife and Fork Club (formerly Yeaman's): 516 Howard
Lively Detroit showplace with excellent food and super-size drinks. Need reservations during meal hours. Mammoth salads a specialty at lunch; name entertainment featured in evening along with dancing.

Berman's Chop House: 1431 Times Sq.
Reasonable, excellent steaks are the

PREFERRED by electricians

Milwaukee

heavy-duty portable electric tools

See them demonstrated at our Booth No. 225 . . . Electrical and Electronics Show . . . April 4-6, Kiel Auditorium, St. Louis, Mo. Or at Alabama Electric and Electronics Show, Booth G6, April 17-19, Birmingham City Auditorium, Birmingham, Ala.

It pays to sell the *preferred* line because more and more electrical contractors are standardizing on MILWAUKEE.

They're quality tools, job-tested and proven for over 35 years. Portable tools designed and *ruggedly* built for heavy-duty service. Tools with a uniform "feel," and smooth, steady power furnished by MILWAUKEE-built motors . . . balanced to perfection for handling ease that can't be matched.

The growing, nationwide acceptance and use of MILWAUKEE Electric Tools is proof of their dependability and performance. It's your guarantee of customer satisfaction . . . your opportunity to profit with the line that's become the *standard of quality* with electricians everywhere.

Write today for prices and free literature.

Find Your Nearest Dealer In The Yellow Pages

See your MILWAUKEE Distributor
— Look under TOOLS-Electric

MILWAUKEE heavy-duty electric tools to do the whole job

MILWAUKEE ELECTRIC TOOL CORP., 5390 WEST STATE STREET, MILWAUKEE 8, WIS.

A1-154

SHAWMUT'S®

all new

THE ONLY AC RATED ONE-TIME FUSE

ONE-TIME FUSE

- The only AC rated One-Time fuse.
- Operates up to 38% cooler in switches and enclosures.
- Gives up to 700% more Time Delay than ordinary One-Times.
- Meets all Federal specifications.
- Exceeds all industry standards.
- Carries U.L. Label.
- Provides predictable performance.
- Available in a complete range of ratings — from 0 — 600 Amps.

ANOTHER SHAWMUT "FIRST"

This all-new, silver-plated, One-Time fuse is the biggest advance in One-Times since 1900. It has a "high efficiency link" and pays for itself in power savings alone. A current limiter, it gives the kind of positive protection that modern circuits demand. Until you use Shawmut's All-New, silver-plated One-Time, you'll never know how good a One-Time fuse can be. Send for Bulletin O-T 601 today.

THE CHASE-SHAWMUT CO.

374 MERRIMAC STREET • NEWBURYPORT, MASSACHUSETTS

SUBSIDIARY OF I-T-E CIRCUIT BREAKER CO.

specialty. Always crowded, always noisy, but never too long a wait for a table.

Cliff Bell's: 2030 Park
Literally an oak panelled picture gallery turned into a deluxe restaurant, although the food came first. Dancing evenings, always lively.

Victor Lim's: 48 W. Adams
Ostensibly Chinese, but the proprietors became famous and prosperous and now serve most any dish in a truly deluxe atmosphere.

Stouffer's: 1501 Washington Blvd.
Part of the well-known chain, with mass produced food and drink of excellent quality. (For those who want to eat and git, or for wives on their own.)

Sofferin's Wonder Bar: 1221 Washington Blvd.
A misnomer for a good restaurant featuring American cooking. The separate bar is a lively place, and there is dancing and entertainment in the dining room evenings.

Restaurants . . . Near Downtown. (Lunch, Dinner and Bar, unless noted otherwise).

Joe Muer: 2000 Gratiot
Just about the best and biggest seafood house away from the ocean. Also Lake fish specialties. Reservations useless but the line moves fast. Seasonal items flown in fresh daily.

Stockholm: 1014 East Jefferson
As the name implies, a delicious and inexpensive smorgasbord is featured.

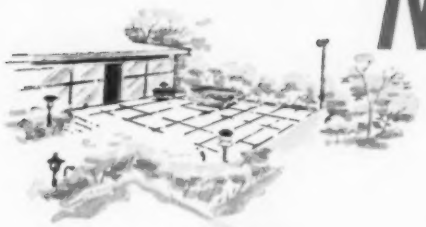
Carl's Chop House: 3020 Grand River
Carl buys most of his beef from prize winning 4-H'ers, and butchers and ages it himself. It's good and surprisingly inexpensive. Reservations helpful.

Little Harry's: 2681 East Jefferson
This beautiful old New Orleans style building was for 48 years the home of one of Detroit's leading families. Then it became a speakeasy, and since repeal, has been a fine restaurant. Steaks and seafoods nicely served in a dining room with a fireplace, piano bar.

Roma Cafe: 3401 Riopelle
Detroit's oldest Italian restaurant. In the heart of Detroit's picturesque farmer's market.

Roostertail: Foot of Marquette off East Jefferson.
One of Detroit's newest and glossiest restaurants, almost on the scale of New York's Latin Quarter. Name entertainment featured nightly. Glassy modern, right on the Detroit River. It's worth

NOW...is the season get your share of OUTDOOR LIVING–LIGHTING PROFITS



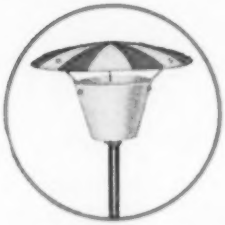
with

Floralites®

New

16" green reflector with new offset stem.

Here's a bright new note—beautiful FLORALITE Planter for the patio. A profit-maker itself, it will help boost sales of additional accessories.



FLORALITE with plain or color-striped fibre glass reflector.

Coachlite in satin black with copper trim.

3-tier metal shades in black and white.

OTHER STYLES IN A COMPLETE LINE

Hanging bird house styling, Pathlites, Borderlites, Bar-B-Q, Gamelite and Floods.

The wonderful new adventure of lighting in outdoor living is fast catching on. Illuminating gardens, patios and walkways with FLORALITES can bring big profits to you.

Portable FLORALITES with spikes are ready for use, just stick in the ground and plug into convenience outlets. Accessories include portable and stationary convenience outlets, underground junction boxes and other components for permanent installations.

Contractors and dealers will be looking for the profitable Steber FLORALITE line; stock up now and promote outdoor living-lighting for bigger profits. Attractive brochure and letter stuffer with installation instructions, are available for your promotion program.

STEBER

STEBER DIVISION • THE PYLE-NATIONAL COMPANY
2700 Roosevelt Road, Broadview, Illinois
242 Anderson Street, Los Angeles, California

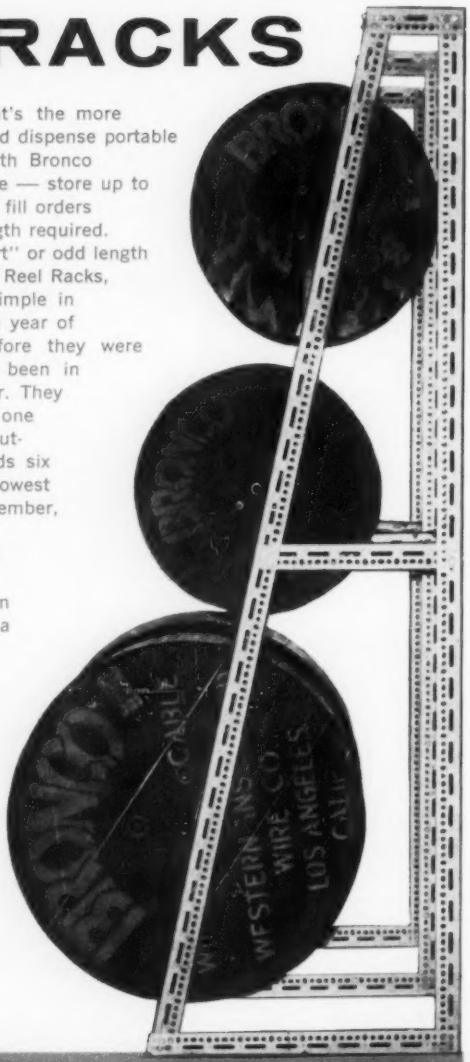
MANUFACTURED IN CANADA BY
Pyle-National (Canada) Ltd., Toronto, Ontario

Stock 23,000 ft. of electrical cord and cable in only 10½ square feet of floor space with

BRONCO

REEL RACKS

Reels mounted on racks — it's the more profitable way to buy, stock, and dispense portable electrical cords and cables. With Bronco Reel Racks you save floor space — store up to 2,200 feet per square foot. You fill orders — in one piece — to exact length required. You end up with only one "short" or odd length — the last on the reel. Bronco Reel Racks, although straightforward and simple in design, underwent more than a year of planning and modification before they were released. Now hundreds have been in continuous use for over a year. They furnish an instant solution to one of your "we've-got-to-figure-it-out-soon" problems. One rack holds six reels — two 36" reels on the lowest level, four 24" reels above. Remember, all Western Insulated Wire Company cords can be obtained on 24" or 36" non-returnable reels at no extra cost. Reels can be easily lifted in place with a fork lift truck or a chain hoist. A loading device that can be permanently mounted on the rack is available. Bronco Reel Racks are shipped, knocked down, complete with slotted angle cut to accurate length, bolts, nuts, corner plates, hooks, flanged bars, and assembly instructions. The cost? A surprise, a very pleasant surprise. Write us for complete details on the reel deal you can't afford to pass up. Better yet, ask your Bronco Sales Representative.



BRONCO WESTERN — BRED FOR STAMINA

Bronco Electrical Cords and Cables are sold through Electrical Wholesale Distributors, and are manufactured by

WESTERN INSULATED WIRE COMPANY
Los Angeles 58, California

sitting there just to watch the freighters go by. Dancing. Reservations at night.

Schweizer's: Foot of Hastings off East Jefferson.

One of Detroit's oldest and most revered, to the point where a new expressway was routed around it. German specialties. Fairly reasonable. Closed Sundays.

Mario's: 4222 Second

Colossal Italian meals without the checkered table cloth atmosphere. The free antipasto, which is the first of about six courses, would fill most people. Wide price range. Reservations essential.

Terova's Rathskellar: 6521 John R.

Large and busy, but still careful with cuisine and service. German specialties featured, as well as good steaks.

Special Mention . . .

When in Detroit why not take a 10 minutes trip by bus or cab through a tunnel and visit Canada. The thriving city of Windsor offers worthwhile discounts on imported trinkets, but keep the purchase under $10—customs duties wipe out savings above this amount. While there try:

Al Siegal's Elmwood: Dougal Rd. on Highway 3 (10 minutes out of Windsor)

Mammoth night spot that always features top name entertainment. Excellent meals that are surprisingly reasonable. Dancing.

Suburban Restaurants: Long way out but listed only because they are really worth the trip.

Al Green's: 15301 E. Jefferson, Grosse Pointe

Home stand of a nationally known caterer. Several separate dining rooms, with the newest featuring Polynesian delicacies. Dancing. Expensive.

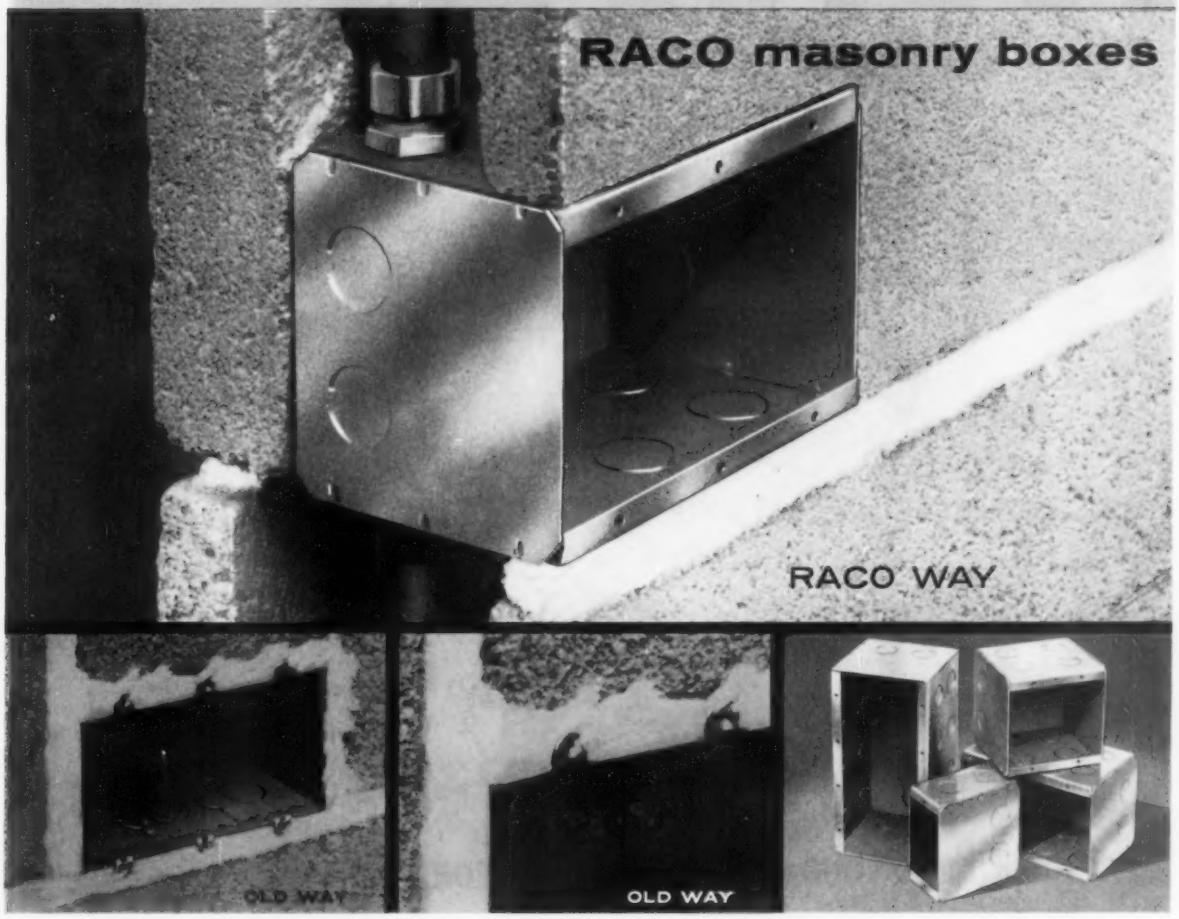
Kingsley Inn: Woodward at W. Long Lake Road. Bloomfield Hills

Hangout of top auto and advertising executives. Excellent food but expensive. Entertainment nightly. A dignified, dressy place.

Continued

This restaurant and entertainment guide was prepared with the cooperation of the Detroit McGraw-Hill News Bureau and the assistance of two Detroit NAEDers, Herb Blumberg of Cadillac Electric Supply Co., and Bill McNaughton of McNaughton-McKay Electric Co. EW extends its thanks, and looks forward to meeting Herb and Bill at the convention together with all other NAED members.

RACO HELPS YOU...
do a better job...save time and money

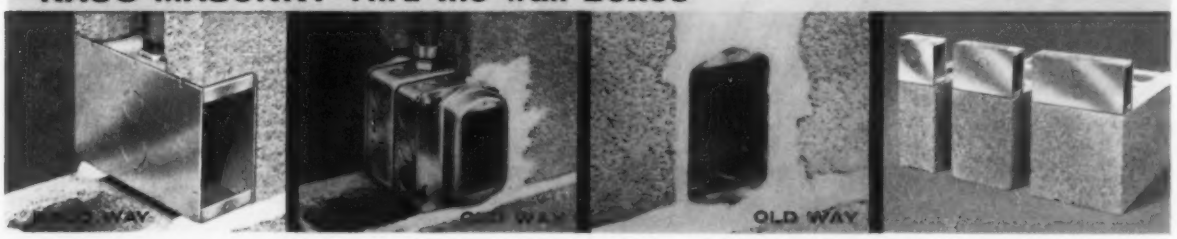


Raco masonry boxes have a "sheer" rectangular design saving installation time—no ears to cut around.

Raco boxes are deep—conduit fits the voids of the block perfectly. Device holes are on the inside of Raco boxes—eliminating re-tapping and reducing "mudding around".

Available in 2, 3, or 4 gang boxes; 2½" or 3½" depths with ½" or ¾" knockouts. Whatever the job, Raco has a time-saving masonry box to fit the need.

RACO MASONRY Thru-the-wall Boxes



Raco masonry thru-the-wall boxes replace two boxes, one fitting and two plaster covers—you save money, material and labor. Square cornered Raco boxes require less "mudding" and less time to install. Available in three sizes—for use with 4", 6" or 8" cement blocks. You save time and money, do a better job, with Raco masonry through-the-wall boxes.

Send for the Raco masonry box brochure today.

RACO

ALL-STEEL EQUIPMENT INC., Aurora, Illinois

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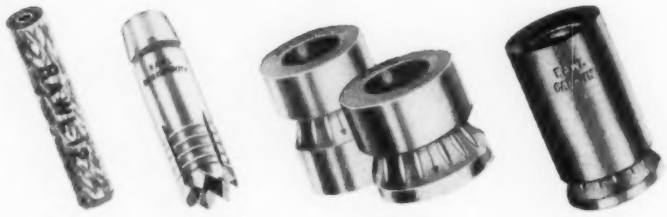
PRODUCTS

A COMPLETE LINE OF ANCHORING AND DRILLING DEVICES FOR FASTENING ANYTHING TO MASONRY.



Rawlplugs | Saber-Tooth | Multi-Calks | Calk-Ins

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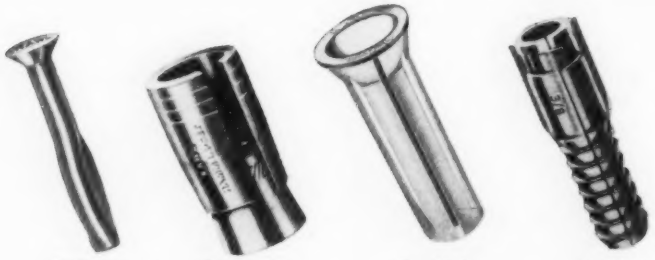


Rawl-Drives | Hammer-Sets | Scru-Leads | Lag-Shields

FOR WHATEVER YOUR CUSTOMERS NEED FOR

Spring-Wings | M/T-R/T and T/S-S/T forged drills | Fast spiral and deep flute carbide drills

FASTENING TO OR DRILLING IN MASONRY.

If you'd like to know more about this full line of high profit, user accepted masonry anchors and drills, please call or write

J. E. **BURKE** — Marketing Manager—Wholesale Division

THE RAWLPLUG COMPANY, INC.

202 Petersville Road, New Rochelle, N. Y.

R-17

Entertainment . . .

Detroit, somewhat to the dismay of those who wish to build up the convention traffic, is a genuinely clean town. Fortunately or otherwise, there is nothing remotely akin to the bawdy atmosphere of Chicago's Cicero, New York's Greenwich Village or New Orleans's Bourbon St. Devotees of the ecdysiastic art will find better sport amidst the lingerie ads in the morning newspapers. On the bright side, there are no clip joints and it is perfectly safe to ask a cab driver for his recommendations.

Night clubs close promptly at 2 AM weekdays, and only beer and wines are sold on Sunday. Roughly the same hours apply across the river in Canada.

What To See And Do . . .

Auto plants: Most of the Detroit area auto assembly plants offer conducted tours when they are in operation. You can watch a bare chassis become a complete car while you walk alongside it. Tours of the Ford Motor Co.'s mammoth Rouge assembly plant and steel mill emanate on the hour from the Ford Rotunda, 3000 Schaeffer, between 9 and 3 weekdays. Tours of other companies can be arranged if you form a group and call the respective departments of public relations, giving a few hours notice.

Henry Ford Museum: Oakwood Blvd., Dearborn.

Don't miss this permanent record of Americana amassed by the greatest string-saver of them all, Henry Ford. Items on display range from early American China to the world's largest steam locomotive. The collection of old cars of all makes is outstanding.

Greenfield Village: Adjacent to the Ford Museum.

Another must for the whole troupe. Here are the actual birthplaces and workshops of early industry titans that Henry Ford admired and knew. These buildings were dismantled and moved to Dearborn from their original locations at the cost of millions. Included are Edison's Menlo Park laboratory and H. J. Heinz' original pickle factory. The paddle wheel steamboat ride is fun, and horsedrawn wagons provide transportation for the weary of foot.

Detroit Institute of Art: 5200 Woodward, near downtown.

One of the country's finest art collections on permanent display. A special exhibition of precisionists is featured from March 26 through May 7.

Masonic Temple: 500 Temple, near downtown.

The Philadelphia Orchestra is ap-

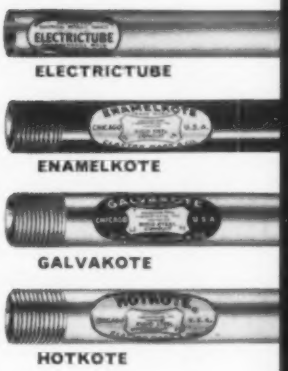
CLAYTON MARK

exclusive

FINISH

make the

"rifle bore test"



See why wires fish easier through super smooth Clayton Mark "ELECTRICTUBE"

• SUPERIOR ENAMEL • SMOOTHER I.D. • EXCLUSIVE D.C. WELD

Like the sleek, smooth barrel of an army rifle on inspection – Clayton Mark thinwall electrical conduit meets all tests to stand above competition. Manufactured from superior quality steel, "Electrictube" withstands the abuse of construction yet bends and cuts easily. The interior surface is coated with a specially prepared enamel that won't soften, gall, flake or chip. Continuous D.C. Weld is an exclusive feature. Conclusive tests have proven that wires pull through Clayton Mark conduit with the least pressure under a variety of temperatures and conditions. Yes, take another look . . . and order Clayton Mark conduit – the "Contractor's Favorite" for more than a half of a century!

CLAYTON MARK AND COMPANY

1907 DEMPSTER STREET · EVANSTON, ILLINOIS · U.S.A.

PUMPS · WATER WELL SUPPLIES · CONDUIT · UNIONS · TUBING

Floodlights have spun aluminum reflector with ANODAL finish. Cast aluminum socket housing has built-in cooling fins, integral wiring compartment and watertight connector. Silicone gasketing at critical points. All hardware except yoke and mounting bracket is non-ferrous or stainless steel.

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MERCURY VAPOR **Spreadliters**

400-1000 WATTS

Color Corrected Lamps—Ribbed or Clear Heat-Resistant Lens

- Uniform Distribution: No Hot Spots
- Full 18" Parabolic Reflector: No Trapped Light
- Fin Cooled: For Greater Efficiency
- Simple Installation: Fully Adjustable
- Easy Servicing: No Tools Required
- Sturdy, Yet Light in Weight
- High Efficiency: More Lumens Per Watt
- Versatile: Can Be Used Anywhere
- Listed by Underwriters' Laboratories

Sold NON-EXCLUSIVELY Through Recognized Steber Distributors

Write for Spreadliter Bulletin with Photometric Data and Description of Optional Mounting Arrangements.

STEBER DIVISION • **THE PYLE-NATIONAL COMPANY**

2700 Roosevelt Road, Dept. 71, Broadview, Illinois; 242 Anderson Street, Los Angeles, California

MANUFACTURED IN CANADA BY
Pyle-National (Canada) Ltd., 33 Ingram Drive, Toronto 15, Ontario

pearing here on May 3, 8:30 PM. Tickets available through Grinnel Brothers, Detroit.

Briggs Stadium: Trumbull and Michigan, near downtown.

Home of the Detroit Tigers who are scheduled to play the Boston Red Sox here on April 29, and then the next day there is a double header with the Baltimore Orioles. Tickets obtainable by writing the Tigers Baseball Club at the above address.

Belle Isle Park: Off of E. Jefferson at Grand Blvd.

Drive out here and get a close-up of the freighters passing by on the world's busiest inland waterway. There is one every five minuutes, on the average, day and night. Refreshment stands and recreational facilities.

Cranbrook: Lone Pine, off Woodward in Bloomfield Hills.

For the camera fan. One of the most magnificent formal landscapes in the country, set off by buildings designed by famed artist Eliel Saarinen.

Fort Wayne: 6053 W. Jefferson

In this still active military post stands the original fort that protected Detroit from invasion by the French in Canada. Interesting museum contains early military relics.

• **Funsville**—Without a doubt, Detroit is a city of many places of interest and those after meeting hours can be spent in a most sociable atmosphere. For real satisfaction from the convention, attend the meetings conscientiously, visit the exhibition booths, renew friendships at the manufacturers' suites, and then have fun!

* * *

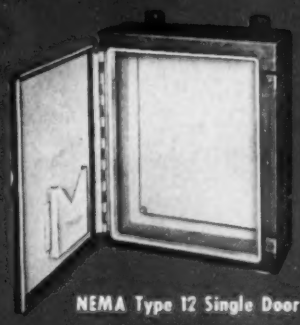
NEWS

KC Distributors Hold Trade Show

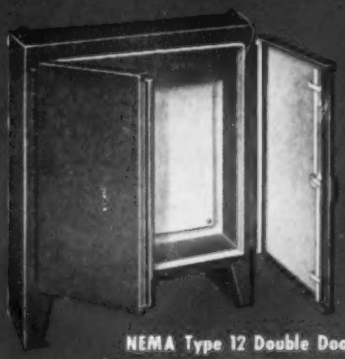
KANSAS CITY, MO.—Electrical wholesale distributors in this city got together last month for a Supply Trade Show, which was held in the Municipal Auditorium. The newest in supply, apparatus, lighting, and electrical heating equipment was on display. The three-day event was held March 28, 29, and 30, and admission was by invitation only.

Distributors participating in the show were: W. T. Foley Electric Supply Co.; Kansas City Electric Supply Co.; Continental Electric Co.; General Electric Supply Co.; Glasco Electric Co.; Graybar Electric Co.; Missouri Valley Electric Co.; Rossner Electric Co.; and Tiemann-Hess Electric Supply Co.

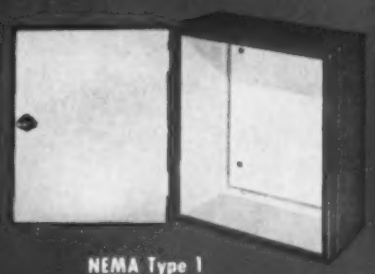
BOSS . . . COMPLETE LINE OF ELECTRICAL ENCLOSURES



NEMA Type 12 Single Door



NEMA Type 12 Double Door



NEMA Type 1

Oil Tight Console

Oil Tight Pushbutton

BOSS

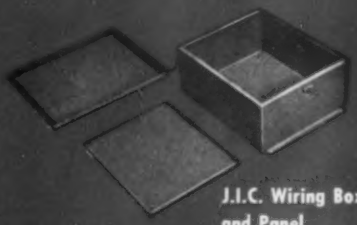
From NEMA Type 12 and J.I.C. Enclosures for critical atmospheric conditions, through all types of Wireway and Fittings . . . stock or "specials" . . . BOSS offers you *excellent quality* and *prompt delivery.*

The complete BOSS line is job-engineered for quick, easy installation. Enclosures are code gauge steel with smooth corners and firm, but easy knockouts. All are UL approved. Durable gray baked enamel finish.

Immediate delivery on stock items from central location. Sell BOSS for increased profits. Write for Catalog on the complete line of BOSS Electrical Enclosures.

Visit our Booth No. 313 at N.A.E.D. Convention, April 29-May 3, Detroit

Heavy Duty Unit Enclosures



J.I.C. Wiring Box and Panel

Type "A" Box

Screw Cover Pull Box

Transformer Cabinet

Telephone Cabinet

J.I.C. Flanged Hinge Cover

Complete Line of Fittings

Flangeless Hinged Cover Lay-In

Flanged Hinge Cover

Flangeless Screw Cover

THE HUENEFELD CO.
2703 SPRING GROVE AVE.

ENGINEERED PRODUCTS DIVISION
CINCINNATI 25, OHIO

Read this...

From:
WESTERN CONTRACTING CO.

4 Months without a bulb failure. Of 22 STURDILITES burning for 4 months on a ruggedly used 60 ft. portable tower only 3 bulbs burned out. In other fixtures previously used, bulbs burned out every 2 or 3 days.

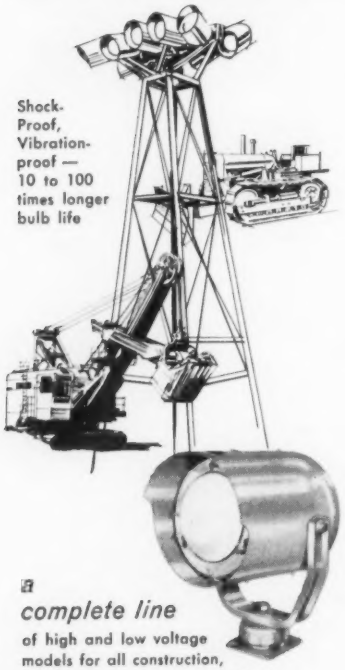
it's typical of the demand for the

NEW

Super Rough Service

STURDILITE®

FLOODLIGHTS



Shock-Proof, Vibration-proof — 10 to 100 times longer bulb life

complete line

of high and low voltage models for all construction, mining, quarrying and industrial applications.

ATTRACTIVE DEALER PROPOSITION

For information and literature write

PHOENIX PRODUCTS COMPANY
4777 N. 27th Street • Milwaukee 9, Wis.

NAED Convention Program

Cobo Hall—Detroit, Mich.

April 29—May 3, 1961

SATURDAY—April 29

9:00 A.M.—Registration, Sheraton-Cadillac Hotel Lobby.
3:00 P.M.—Panel on Industrial Electronics.

SUNDAY—April 30

10:00 A.M. to 5:00 P.M.—Registration, Cobo Hall
2:00 P.M. to 5:00 P.M.—CONFERENCE BOOTH CENTER OPEN. Hall C—Cobo Hall

MONDAY—May 1

9:00 A.M.—Registration, Cobo Hall.
9:30 A.M.—Opening Convention Session. Members and Guests.
B. H. Boatner, VP Eastern Region, Presiding.
Call to Order by President J. A. Meier.
National Anthem—Invocation—Announcements
Address of Welcome by Hon. Louis C. Miriani, Mayor of City of Detroit. Remarks by presiding Chairman.
"There'll Never Be Another You!"—Address by W. H. Gove, The Bill Gove Organization, Coral Gables, Fla.
Presentation of Certificates to Honorary Life Members.
"Wake the Town and Tell the People!"—Address by Dr. Kenneth McFarland, appearing through the courtesy of General Motors Corp. Announcements.
President's Address—J. A. Meier. Adjournment.
2:00 P.M.—5:00 P.M.—CONFERENCE BOOTH CENTER OPEN. Hall C—Cobo Hall

TUESDAY—May 2

9:00 A.M.—Registration, Cobo Hall.
9:30 A.M.—General Convention Session. Members and Guests.
C. E. Butler, Jr., Vice President Central Region, Presiding.—Call to Order—Remarks.
Address—R. J. Eggert, Marketing Research Manager, Ford Motor Co., Dearborn, Mich.
Address—Norman Ferguson, Vice President, District No. 9; Chairman, Marketing Committee, National Electrical Contractors Association.
K. P. Rehwaldt, Vice President, Western Region Presiding.
Address—R. H. Jones, General Manager, General Electric Supply Co., Bridgeport, Conn.
Address—Dr. Robert Bruce Pierce, Metropolitan Methodist Church, Detroit, Mich. Announcements.
12:00 Noon—Zone Election Meetings. Members Only.
2:00 P.M.—5:00 P.M.—CONFERENCE BOOTH CENTER OPEN. Hall C—Cobo Hall

WEDNESDAY—May 3

9:30 A.M.—General Convention Session. Members Only.
T. C. Treadway, Jr., Vice President Southern Region, Presiding.
Call to Order—Necrology—Remarks.
Report of the Finance Committee.
J. M. Newton, Sr., Chairman
10:00 A.M.—General Convention Session. Members and Guests.
Address—"Planning for the Future" by R. F. Baldwin, President Baldwin-Hall Co., Inc., Syracuse, N.Y.
Presentation on Electric Heating
Report of the Distribution Research Committee.
S. V. Reiss, Chairman
Executive Director's Report, Arthur W. Hooper.

for PEAK PERFORMABILITY

COPPER FREE-CAST ALUMINUM

..Red dot COVERS

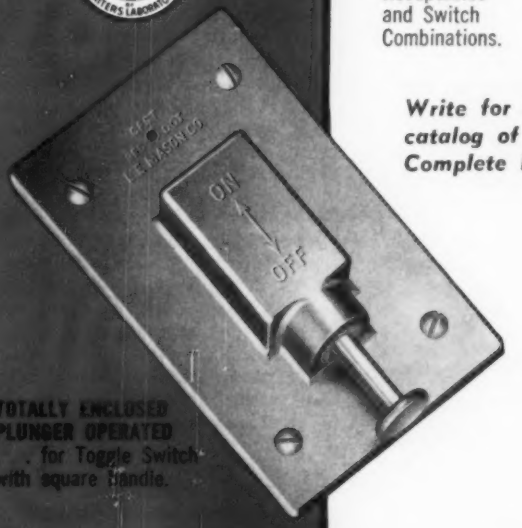
Featuring . . . Crisp Designs . . . New Concepts

- SNAP-ACTION SPRING COVERS . . . OPEN WIDER STAY OPEN . . . SNAP SHUT
- STAINLESS STEEL CONCEALED SPRINGS
- STAINLESS STEEL HINGE PINS
- NON-FERROUS MOUNTING SCREWS
- NEOPRENE GASKETS . . . PRECISION SEALING

SINGLE OVERALL HINGED DOOR . . . for Single Receptacles.

INDIVIDUAL HINGED DOORS . . . for Duplex Receptacles and Switch Combinations.

Write for latest catalog of our Complete line



TOTALLY ENCLOSED PLUNGER OPERATED . . . for Toggle Switch with square handle.

WEATHERPROOF COVER PLATES

for use with "FS" Boxes

RED ● DOT cover plates are made of ultra-hi pressure cast, copper-free aluminum, certified to be within specified tolerances as recognized by Underwriters Laboratories for aluminum conduits. Each cover is individually packaged, with Gasket and Mounting Screws, in new eye catching boxes designed for easy identification. Style numbers and quantities are printed in large easily legible type.

SERVING INDUSTRY Mason FOR 25 YEARS

L. E. Mason Co. BOSTON 36, MASSACHUSETTS

Sold only through authorized Electrical Wholesalers

LEVITON QUALITY *talks...*

"You're right in figuring Leviton on this bid!..

"Darn right! I've been very happy with Leviton on the last two jobs. And this may mean the third."

This typical wholesaler-contractor conversation at bid time is being repeated 'round the country. Leviton's line of specification grade devices have caught on.

Everyone is pushing Leviton because of the delivery, the price, the completeness of line and the consistent quality. Architects and engineers have the confidence to specify Leviton on their biggest projects.

Quiet Switch in 15A.-120-277V.A.C. only and 20A.-120-277V.A.C. only

HIGH CAPACITY will accommodate the high inductive loads of fluorescent systems, or full rated capacity of tungsten filament lamp loads. Take full load currents up to 80% of the switch rating for motor control.

LEVITON QUALITY TALKS BUSINESS

LEVITON®

LEVITON MANUFACTURING CO., INC.,
BROOKLYN 22, N.Y.
Chicago • Los Angeles • Montreal, Canada

Contact American Insulated Wire Corp., Pawtucket, Rhode Island, a Leviton subsidiary, for a complete line of insulated wire and cable products.

Profit Is Not . . .

Continued from page 128

Why do contractors bid jobs far below the estimate? According to The Constructor of May 1960, 14.7% of all business failures in 1959 were in the construction industry. Two of the reasons were: "The inability to relate and understand costs—desperate estimating can be a form of business suicide and makes bidding difficult for experienced and realistic contractors"; and "inadequate profit margins—when a company bids without a profit margin, or with an extremely slender margin, there is no room for error." One of the reasons some contractors bid extremely low is that there is always some distributor or manufacturer who will bail them out by cutting the price, and some contractors depend upon this when they bid. I am a firm believer in helping anybody I can, but this practice of bailing out those who bid on that basis penalizes the contractors who had a more realistic bid and serves only to encourage further low bidding and decrease profits for all, including the contractors.

So, who is to blame for low profits in the electrical industry? All of us. Each segment of the industry contributes its share of low profit practices, although all within those segments are not equally guilty. Through price-cutting, cheap substitutions and reducing specifications, the electrical industry has educated the customers to expect the electrical work and material at low prices. Too much of today's time is spent by people looking for cheaper material instead of trying to sell better material. There is absolutely no reason why the electrical work should be cheap; it is the most vital part of a structure (who ever heard of the plumbing setting fire to a building?). But I believe there is more junk on the market in the electrical industry than in any other construction industry. Many times the customer does not, in fact, even get what he pays for when he buys such junk.

The Jobber's Salesman* (if you remember it, you aren't so young, either) once carried the slogan, "Sell Them Something More." Why don't we do that instead of trying to see how cheaply we can do a job. A good electrical installation of good material is not expensive when all factors are considered. However, I would like to add "At a Profit" to the above slogan because unless you sell that better job of better material at a profit, you will not be in business to accommodate the future needs of the more than satisfied customer your good selling produced.

Continued

Cast of high-strength malleable, these new RIDGID Conduit Benders have an exceptionally smooth, typically RIDGID quality finish your customers will like on sight. Show them the extra deep sockets, and they'll see the threads down at the bottom. Elimination of strain on threads of pipe handle reduces breakage.

RIDGID Thin-Wall Conduit Benders Available in 3 Sizes

B-1677 Bends ½" Thin-Wall Conduit to 4" Inside Radius

B-1678 Bends ¾" Thin-Wall and ½" Heavy-Wall Conduit to 5" Inside Radius

B-1678 Bends 1" Thin-Wall and ¾" Heavy-Wall Conduit to 6½" Inside Radius

Exceptionally smooth side-walls hug conduit snugly . . . minimize distortion. Benders form conduit to meet National Electric Code Standards. Steadying foot pressure is easily applied on non-slip step plate. Easy-to-see arrows give accurate guide for back-to-back and stub bends.

RIDGID Hickey-Type, Heavy-Wall Conduit Benders

B-1711 Bends ½" and ¾" Heavy-Wall Conduit
B-1712 Bends ¾", 1" and 1¼" Heavy-Wall Conduit

Here's a rugged bender for heavy-wall conduit. Deep notch in lifting hook protects threaded ends. Face of bender has hardened teeth for safe, long wearing, non-slip grip.

RIDGID

Market tests have proven instant preference for these new RIDGID Conduit Benders. Don't miss these easy sales. Send your stock order today!

THE RIDGE TOOL COMPANY, ELYRIA, OHIO, U.S.A.

So what does P&S mean to me?

It Means a Lot, Mr. Distributor!

P&S means a clearly defined Distributor Policy.

P&S means a complete line of quality wiring devices—PERFORMANCE SPECIFIED—for all wiring jobs—large and small.

P&S means hard-hitting, consistent advertising and promotional programs which create more business for you.

P&S means an aggressive sales force cooperating with you.

P&S has a firm belief in the interdependence of the electrical wholesaler and the electrical manufacturer.

PERFORMANCE SPECIFIED

Stop in and see us at the NAED convention, Booth No.6

P&S PASS & SEYMOUR, INC.
SYRACUSE 9, NEW YORK

60 E. 42nd St., New York 17, N.Y. 1440 N. Pulaski Rd., Chicago 51, Ill. In Canada: Renfrew Electric Co., Ltd., Toronto, Ontario

No sir, profit is not a dirty word. Volume may be a necessary evil, but profit is a living virtue; without it there is no living. As I write this, I can hear the chimes of a nearby church; those chimes and that church were paid for with contributions from somebody's profits. Look to your profits, my friends, and your profits will look after you.

None of what I have written is an "open sesame" to profit, nor is any of it anything you do not know, but maybe you don't think about it when the order or the job is a big one that may get away. I hope all of you grow to be as big as you wish, but only with a profit; otherwise you are a nuisance to the rest of us and, really, not much use to yourself. **EW's name during the 1920s.*

Industry Observes NEW Despite Antitrust Cloud

NEW YORK—Interest in National Electrical Week reached its highest point in its history this year when more than 500 NEW programs were held throughout the nation during the annual observance, February 5-11, although overshadowed by sentencing handed down in the government's largest antitrust case on record, against electrical equipment manufacturers.

In New York City, the week was observed by an industry luncheon, sponsored by the National Electrical League of New York, Inc. It featured an address by James H. Jewell, vice president, Westinghouse Electric Corp., and the presentation of a scroll to N. J. MacDonald, president of Thomas & Betts Co., Elizabeth, N.J. in recognition of his outstanding efforts as NEW chairman during 1959 and 1960.

MacDonald was also on hand, when Governor Robert E. Meyner officially proclaimed National Electrical Week in New Jersey. In a ceremony marking the impact of electricity on the growth of the State, it was noted that more people are employed in the electrical industry than any other industry in the Garden State.

CORRECTION:

IN the article, "Imports, What's Their Impact," (*EW, Feb. '61, page 61*) a spokesman for local 17, IBEW in Detroit, was misquoted on page 71. The quotation read: "we haven't seen any foreign material put on jobs in Detroit. If we did, we would like it. . . ."

If should read: "we haven't seen any foreign material put on jobs in Detroit. If we did we would not like it."

ALLIS-CHALMERS

You profit by selling

"ONE-SOURCE" EQUIPMENT

You can lower your operating costs and increase your profits in a hurry by selling Allis-Chalmers electrical equipment.

This one source for "teamed" equipment saves application time, and time of coordinating several different suppliers. A-C offers you maximum engineering help, too.

Let's talk it over. Profitable opportunities are still open. For information, call your nearby A-C district office or write ***Allis-Chalmers,*** *Distributor Sales Promotion, Milwaukee 1, Wisconsin.* A-1291

SEE US AT THE NAED CONVENTION APRIL 30-MAY 3, DETROIT, MICH.

Wholesalers' Report

How's Business So Far in '61?

Distributors throughout the nation report a slow first quarter with the outlook for a Spring pickup and signs of a continuing increase in sales and profits in '61.

FOR the first quarter of 1961 electrical wholesale distributors contacted in nine major market areas across the country report a general decline in sales and profits as compared to the same period of last year. However, most expect volume to increase greatly within the coming months and are looking forward to a good year in volume and profits.

As of March 15, here is what electrical distributors had to say about the business picture:

• **WASHINGTON, D.C.**—Washington distributors agreed in general that business was bad. "It's lousy. We're off about 30%," commented one wholesaler.

Distributors in the nation's capital didn't have to look far to see what was wrong. Rough winter weather virtually stopped all area construction. That, coupled with a national business slowdown which hurt overall new construction awards and electrical subcontracting, in turn, hurt wholesalers in this area. As a result of the general business slowdown, a new problem has arisen among Washington area distributors. Some distributors said they cut their profit margins down to 2% to 5% over cost to keep paying overhead, and thus have created a new and rough competition battle.

Distributors hurt by the new competition commented: "The competition situation is bad. No one is making a profit." "They're degrading the industry," complained another wholesaler. **"I wonder why these people are anxious to give business away. They handle electric units as they would handle wheat. They have no feeling about the business; they know as much about electric wholesaling as the man in the moon."**

One chain distributor noted another trend. "When business is off, then the discount rate is lowered; when business gets better, prices will rise again," he said.

The outlook in this area seems to favor this theory. Some recent signs indicate an upturn is near (and by press time it may have started). There is a lot of both home and office construction on the boards, although job releases are being held back. And government spending is slowly beginning to rise. Most distributors around Washington feel that summer will be good, even record breaking. The price outlook, however, is somewhat hard to figure. For the first two months of '61, while business declined, supplier prices rose. According to one wholesaler, the price rise will probably continue, even with better business.

Out in the Far West, along the Pacific Coast, distributors report similar business patterns.

• **LOS ANGELES**—Business, in this area, was generally off from 5% to 10% in January, but picked up slightly in February and early March. Only one company reported sales about even with last year, of those contacted.

"Volume has been off, prices have been lousy. However, the outlook is better. By April a lot of projects should be underway," said one LA distributor. A note of optimism was also injected in the picture by another wholesaler. "Business was down in January, but there was a little improvement in February. We're receiving more requests for quotations which is a good sign. We expect business to start improving."

• **Looking Up**—Electrical distributors on the West Coast, on the whole, are more optimistic than they have been for a long time. Predictions there have been that business will pick up in four to six months, but now most wholesalers indicate that it will start getting better in 2 to 3 weeks. Here's how one distributor put it: **"Our supply business has held up pretty well. Our dollar volume was slightly ahead of last year.** We had several good orders to break which we've been after for some time. It's our experience that requests for bids are running about the same as they have been. We will be happy if we stay with last year's figures for the next several months." According to this distributor, 1960 was an average year.

In the neighboring market area of San Francisco, the business picture also appeared to be getting brighter.

• **SAN FRANCISCO**—As for the volume and profit picture, "we have no complaints," said one wholesaler.

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These four franchise features help you

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When you distribute the Allis-Chalmers control line, you get help specially planned for you and other industrial distributors like you.

Promotional programs are fresh — exciting — stimulating. Promotional bulletins, sales kits and visual aids help your salesmen do a better job.

Sales training meetings . . . in your place of business . . . at the factory . . . help you keep your salesmen fully informed about new control products and selling techniques.

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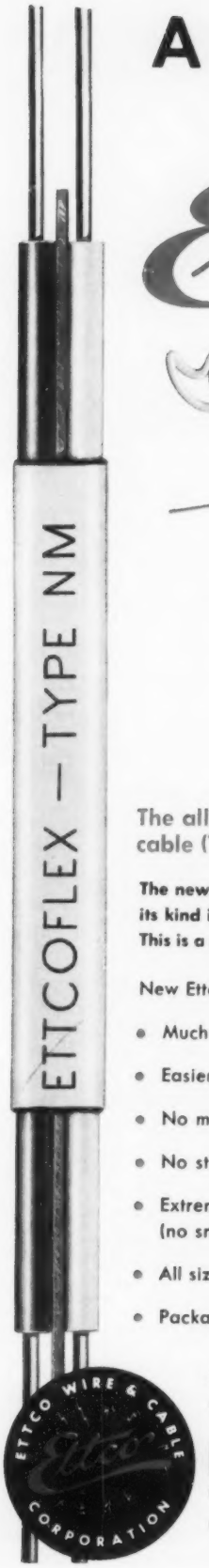
In addition, recommendations and help on profit-affecting procedures such as accounting and finance are always easy for you to obtain from Allis-Chalmers.

Franchises are now available in some areas for control, compressors, motors, pumps, and transformers. For complete information, call your nearby A-C office or write ***Allis-Chalmers,*** *Industrial Equipment Division, Milwaukee 1, Wisconsin.*

A brand new jacket for Ettco Flex



The all-new Ettco Flex* non-metallic sheathed cable (Type NM) is now P.J. (plastic jacketed).

The new Ettco-Flex P.J. is the first completely new product of its kind in the cable industry for over a quarter of a century. This is a result of ETTCO's constant research and development.

New Ettco-Flex is better by far because it features . . .

- Much smaller diameter than any competitive product.
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- No messy paper wraps.
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- Extremely smooth and easy pulling through joists and beams (no snagging or ripping of plastic jacket).
- All sizes with and without ground wire.
- Packaging in new convenient white carton.

See and "Feel" the new Ettco-Flex P.J. at your local distributor.

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"About all I can say is that it is competitive. We are running a little ahead of last year, and hope to do as well or better in 1961 than we did in 1960. The 'recession' has not hit us yet, and hopefully it won't at all." Similar opinions were voiced by two other wholesalers. **"We are running about 10% behind as compared to last year. From what our customers tell us, I think we will start going up again; maybe make up the 10% loss and surpass our '60 figure."** "Volume has been holding up pretty constant, so we have no complaint at all. Our 1961 sales should be equal to, if not better than the 1960 figure. As far as any recession is concerned, we don't sit around and talk about it. We dig in and work a little harder, and it doesn't seem to have affected our business much at all."

In the East North Central cities of Detroit, Cleveland and Chicago, electrical wholesalers reported a drop in business volume for the first quarter of '61 with steady improvement in volume as the outlook in the ensuing months.

• **DETROIT**—One distributor contacted in the early part of March had this to say about the situation: "January business was so low we felt forsaken. February didn't look much better until the 20th, but from that point on sales increased and today it looks magnificent. Our greatest increase has been industrial accounts . . . . Our second sales upturn has been through the electrical components we sell to the OEM. Generally speaking, all our business has expanded in the past ten to twelve days. I genuinely believe all businesses will show a slow but steady improvement within the next few months."

Another Detroit wholesaler was a little more cautious in his outlook. **"Overall business has improved during the past month, but we are injecting a note of caution here because it may be seasonal. Normally, this is a better time of the year than any last quarter of a year. So, while we're delighted at the current outlook, I don't know if it can be deemed a stable boom."**

The general business decline in the Detroit area was made more specific by another area wholesaler. "I won't say business is bad, but in the last six months we've been 25% below what we normally take in. About ten days ago I sat in a meeting, representing several electric supply companies, who basically made the same claim . . . 'Business is off from what it was six months to a year ago'—so how the hell can we kick if others have got the same gripe? There have been too many cutbacks in industry that had a major effect on us, coupled

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This symbol stands for circuit breaker

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Simplify your over-the-counter service!

Look at all the residential circuit combinations you provide with just one panel, the PL12 Electri-Center!

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- 24-circuit residential lighting panel
- 100-amp main and 20
- 100-amp main, range and 16
- 100-amp main, range, dryer and 12
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All BullDog Electri-Center® panels with Pushmatic® circuit breakers provide the maximum in protection and convenience. The standard Single Pushmatic circuit breaker puts a 110-volt circuit in a single panel space . . . the Duplex puts two in a single space . . . and 2-pole Pushmatics, even 100-amp breakers, take but two spaces. Result—Pushmatic breakers and Electri-Center panels answer all your over-the-counter calls for residential installations.

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BULLDOG ELECTRIC PRODUCTS DIVISION

PORTABLE *Power Distribution* SYSTEMS

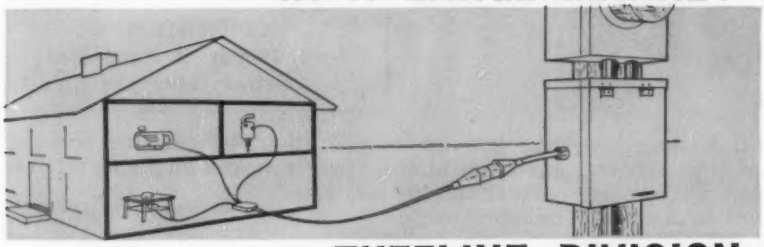
offer UNUSUAL PROFIT OPPORTUNITIES

Every building contractor is a prospect for one or more of these safe, convenient portable power distribution systems. They carry electric power from temporary service or portable generators for tools, lighting and other electrical equipment at construction sites.

HERE'S THE STORY: U. L. APPROVED COMPONENTS . . . 3 POLE SYSTEM . . . DYNAPRENE CORD . . . NEOPRENE MOLDED CONNECTORS . . . WATERPROOF . . . EXTENSIONS AVAILABLE . . . EASILY STORED . . . SAFETY ENGINEERED . . . EASILY CONNECTED TO POWER

AND . . . FOR YOU: AN UNUSUAL MARGIN OF PROFIT

IN A LARGE MARKET



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with general contracts being meager. You'll recall President Kennedy recently named Detroit as one of the major distress areas in the United States. The President's announcement reflects the type of business we've had. I don't anticipate any business being able to ignore the recession until September."

Distributors in Chicago and Cleveland voiced similar opinions of a slow beginning for the year but an upturn in the offing. **"Business is not bad. February figures show that we're running about equal to 1960 right now, and we expect continued increasing activity in March,"** said a Cleveland supplier. Consensus of opinion among Chicago distributors indicates that business is getting very competitive and some people insist on giving things away. **"I think that when these people wake up and see how much it is costing them to do business this way, our profit picture will improve,"** was the viewpoint registered by one wholesaler. Another was more outspoken; **"The vultures are sharpening their pencils and shopping price. We're all scrambling around for the little stuff we wouldn't ordinarily worry about."**

In the South and Southwest, electrical wholesalers echoed the opinions of other wholesalers throughout the nation.

• **ATLANTA**—Georgia distributors attributed a drop in sales a great deal due to the heavy rains that have plagued the area during the past Winter. **"Our business is off about 25% to 30% so far this year, compared with last.** We feel that the unusual amount of rain is largely responsible for the lag. We expect a real improvement just as soon as the weather permits construction to get underway again."

Optimism showed through, even though many sales were literally washed out. "Our business is about the same so far this year as last. There has been a 30 to 60-day delay in getting our materials out because of rain; but we have talked to seven or eight engineers and it looks as though 1961 is going to be a wonderful year."

Texans also attributed a general decline in business to bad weather conditions.

• **DALLAS—Business is lousy, but mostly because we have had lousy building weather.** We have every indication that as soon as any sort of building weather comes along, business will really take off," commented a "Big D" distributor. One chain distributor had this comment: **"I don't think there is much of a decline or many problems in the business area here. I am optimistic for the year and**

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- **RIGID STEEL CONDUIT**
  HOT DIPPED GALVANIZED
- **ELECTRICAL METALLIC TUBING**
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TOMIC'S POLICY

NO SALE

(unless it's wholesale)

Tomic's policy of channeling *every* sale through wholesalers is only one of the many advantages *you* enjoy as a distributor of Tomic's advanced line of electrical fittings. And for your customers, Tomic fittings mean faster connections at less cost because they're *specifically* designed to speed and simplify electrical installations . . . provide a better all-around job!

When you sell the Tomic line—

YOU GET

- 100% sales protection—assuring you of ALL Tomic sales in your area . . . including OEM's!
- Steady profit margins because prices on patented Tomic fittings seldom change.
- Extensive sales support through consistent national advertising, publicity and sales promotion throughout the electrical contracting industry.
- Full representation at national and local exhibits and trade shows.

YOUR CUSTOMER GETS

- Fast, easy electrical installations without special tools or equipment because a twist, a tap, or a snap is all it takes to install any Tomic fitting.
- Positive, vibration-proof connectors and couplings that won't shake, jar or work loose.
- Rugged, all-steel construction—zinc-plated for extra protection.
- Complete technical assistance.
- All orders shipped within 24 hours.

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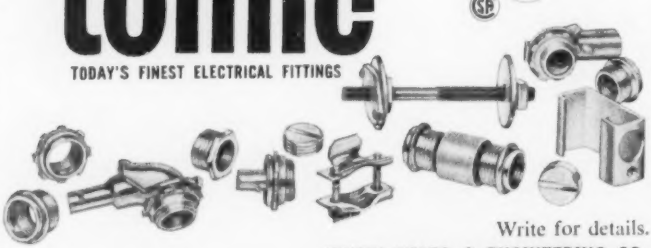

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look for continuing improvement." Other Dallas wholesalers agreed that business is usually off in the early part of the year, but this year even more so, due to bad weather.

Here is what electrical wholesale distributors in the Northeastern part of the nation had to report.

• **NEW YORK** — In the world's busiest trade center, this is what distributors said. **"Business so far, this year, has been quiet. Sales are way below the same period of last year due to stiff competition. The cost of operation has risen, while profit margin has declined."**

Similar trends were reported by distributors throughout the city: "Business has been off about 10% from last year's level at this time. We are hoping for an upturn, and soon." Another stated that volume was the same as last year's level, but the future looked good.

• **Sales Climb**—As EW goes to press, indications are that sales volume among electrical distributors throughout the nation is on the rise, and if the problems of price-cutting and stiff competition can be eliminated, it looks like 1961 will be a strengthening year in sales and profits.

GE Chief Quits Fed Post; Other Resigns Presidency

WASHINGTON, D.C.—Ralph J. Cordiner, chairman of the General Electric Co., has announced his resignation as chairman of the Business Advisory Council, which acts as counsel to the Secretary of Commerce. It has also been announced that Robert Paxton will retire as GE's president because of ill health.

Paxton, who underwent major surgery in January, will not run for re-election as a director at the annual stockholders meeting April 26. Cordiner will serve as chairman and president until a new president is chosen.

Joy Manufacturing Re-aligns Distributor Policy

ST. LOUIS—A new selective distribution policy, where only one principal wholesaler in a normal trade area will stock the division's line of electrical equipment, has been announced by Joy Manufacturing Company's Electrical Products Div.

According to division sales manager, James E. Duff, the entire line of push-button stations and other electrical products will be sold exclusive through all the Electrical Products Division distributors. J. S. Harrell will be in charge of industrial distributor sales under the new program.

special attention is given to

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LACLEDE *HOT DIPPED GALVANIZED* RIGID CONDUIT

Actually, Laclede Conduit carries a *double* protective coating. First, it is hot dipped galvanized inside and out—protected against corrosion with a durable coating of zinc. Then, for added protection, all inner and outer surfaces are covered with a clear coating over the zinc to keep it fresh and bright. This transparent topcoat will not discolor with age, will not turn brittle, is not affected by heat or cold, and is non-toxic. And there are other benefits offered by this outstanding conduit:

- Smooth inner raceways for easy wire pulling
- Easy to bend without fracture of protective coating
- Precision cut, zinc coated threads, protected during shipment and storage with tough plastic caps
- Meets Underwriters, A.S.A., State and Federal specifications
- Available in stock for quick delivery.

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from
SINGLE PHASE
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HOME AIR CONDITIONING AND WORKSHOPS
No three phase wiring necessary. The Add-A-Phase opens the air conditioning market to you.

INDUSTRY
Location may make three phase wiring prohibitive. The Add-A-Phase permits use of 3-Phase equipment without 3-Phase wiring.

FARMS... IRRIGATION
Inaccessable locations dictate an Add-A-Phase. Modern "automated" farm may require multiple Add-A-Phase installations.

WATER WORKS ...SEWAGE
Rural expansion assures a growing market for the Add-A-Phase. No loss of workpower with the Add-A-Phase.

OIL FIELDS
Years of constant oil field pumping proves durability of Add-A-Phase without maintenance calls.

Add-A-Phase
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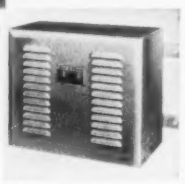

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Div. System Analyzer Corp., Nokomis, Illinois

Gentlemen: Please send, without obligation, complete details on your ADD-A-PHASE Power Converter.

Name_____ Title_____
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SEE FOR YOURSELF . . . package includes many case histories of the success of the Add-A-Phase . . . years of trouble free use. IF YOU HAVE A SPECIFIC ELECTRIC POWER PROBLEM GIVE US THE DETAILS FOR RECOMMENDATION.

CHUCKLE OF THE MONTH

"I called you in here Farfel to tell you that you answered our newspaper advertisement for your job."

Lighting Show:

Lighting Industry Hits It Big

Distributor cites pricing "flea circus."

NEW York City last month was the scene of the biggest lighting extravaganza on record. More than 20,000 members of the lighting industry met in this city to attend the 3rd National Lighting Exposition and World Lighting Forum at New York's Coliseum. Those attending included architects, designers, engineers, distributors, manufacturers, and representatives.

• **Forum**—The World Lighting Forum, a series of nine symposiums conducted by 33 top lighting authorities was a major part of the four-day event. The nine two-hour sessions covered every aspect of the lighting world with special emphasis on the industry's relighting program. Among the topics discussed were lighting as it relates to architecture, visual environment, street and highways, outdoor recreation, residences, theaters and new sources and new products.

Speaking on residential lighting was Sy Shemitz, president of C. S. Mersick Electric Supply Co., West Haven, Conn. "We have created a flea circus in our lighting showrooms by unrealistic pricing," Shemitz declared. "Few distributors have done anything about putting realism back into list prices." Under the circumstances, Shemitz told the residential forum audience, a high commission is unfair and cannot survive, because it usually results in a loss of business.

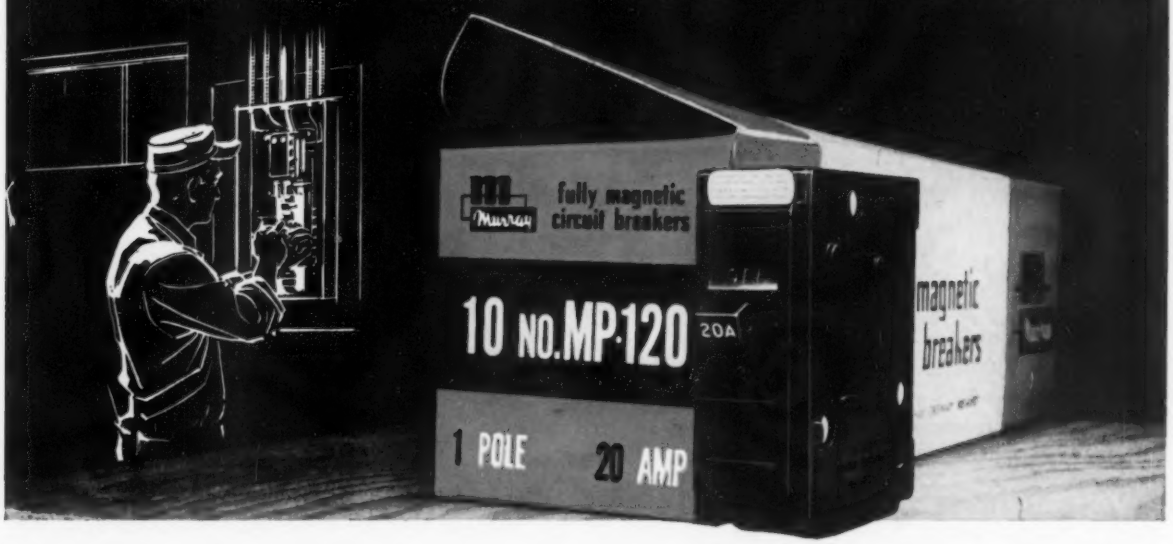
He emphasized that contractors are an important influence in regard to pricing.

"Contractors must take action to request distributors to move prices into line." In this respect, Shemitz noted that the contractor owes an obligation to the distributor who in turn, owes an obligation to the manufacturer. Shemitz is national chairman of the Residential Committee of the Il-

fully magnetic, competitively priced . . . and now

GUARANTEED FOR LIFE

Murray "MP" Circuit Breakers



Build Business, Profits, Prestige!
Install the breaker that's best all around—best for you, best for your customers, and *Guaranteed For Life!*

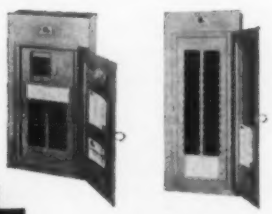
You'll like working with "MP" breakers. *Fully magnetic* and unaffected by heat, these breakers never need derating, carry full rated load, never trip unnecessarily, can be installed anywhere it's most convenient for you or your customers.

Secondly, your customers will appreciate knowing that the breakers you install are *Guaranteed For Life.* It shows you're using the best, helps you get the business.

Extra Sales Aids For You!
You get a special Guarantee Certificate to leave with each customer plus a special sticker for your own promotion to use on each load center. This will boost your prestige, bring extra business your way.

Here's How You Can Cash In On This Guaranteed For Life Program!

See your Murray wholesaler today for full information on this precedent-breaking promotion. Ask him also about the material he has available to help you sell builders and homeowners. Or write Murray Manufacturing Corporation, 1250 Atlantic Avenue, Brooklyn 16, N. Y.



Murray

Backed By A Full Line Of Load Centers

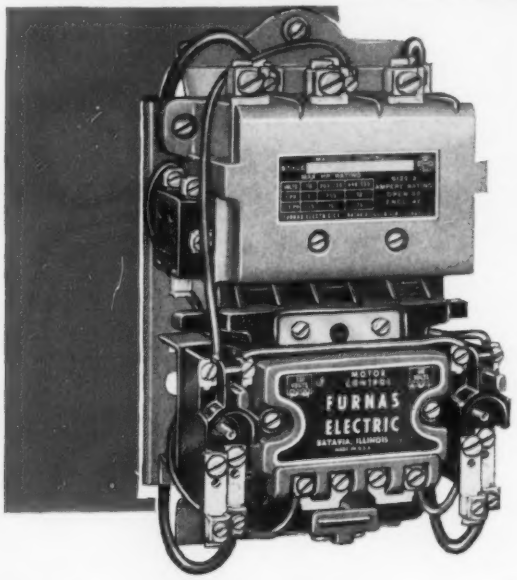
Find out how to increase breaker sales . . . build more profits!

Get full details on

Guaranteed For Life Program at MURRAY BOOTH NO. 411

NAED Convention, Detroit, April 30-May 2

FORWARD with FURNAS FIRSTS



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For many years Furnas Electric has pioneered development of outstanding magnetic control features that are now used extensively throughout the motor control industry. Among "Furnas Firsts" are the outstanding features listed below.

TRULY TRIP-FREE THERMAL OVERLOAD RELAYS—melting alloy type. Non-adjustable trip features assure tamper-proof operation.

ENCAPSULATED DUAL VOLTAGE COILS—greater heat dissipation, and greater mechanical strength. 110-220 or 220-440 volts.

IN-BETWEEN SIZES—provide wider selection of controls to match your motor requirements, effecting savings in cost and space.

AUXILIARY SWITCHLETS—offer easy means for adding auxiliary circuits to the starter at any time.

PRESSURE OPERATED MAGNETIC STARTERS—a single unit offering pilot control for pneumatic and hydraulic systems, eliminating unnecessary wiring and piping.

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FURNAS

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SALES REPRESENTATIVES IN ALL PRINCIPAL CITIES

luminating Engineering Society and 1960 first prize winner of its "Applied Lighting Competition."

Hitting on the topic of the FHA lighting specifications, he affirmed that the "minimums are far too low." The New England distributor mentioned that a report prepared in conjunction with the American Home Lighting Institute had been sent to the federal agency for recommended changes in the specifications.

• **Trend**—An examination of what the manufacturer is offering in new equipment and installations at the exposition showed a definite trend in increasing illumination levels even beyond those recommended in the Blackwell research report of 1959.

There has been a pronounced accent on the day-to-day living aspect of lighting which has led to greater awareness of the esthetics of design in lighting equipment. Higher illumination levels in fluorescent equipment has caused industrial fixtures to be concealed or designed to blend visually with their environment.

• **Relighting**—A large portion of the lighting exposition stressed the relighting program of the industry. Obsolence of equipment and the recognized higher lighting levels have brought forth the greatest relighting program the industry has had to date. Not only are the old lighting standards regarded as obsolete but any early installations of fluorescent lighting equipment are not only beginning to reach the end of their useful life but are already outmoded for producing the necessary foot candle requirements recommended to do a specified job.

Also on view were new lighting products manufactured and designed to meet the industry's need for application to particular problems, such as quartz-iodine lamps, apertured and reflector fluorescent lamps and mercury lamps which have been color-modified. The increasing use of versatile plastics, the perfection of air-handling and controlled sound, and the polarization of light through new shielding mediums eliminating glare were present in many of the new lighting products on display at the four day show.

Distributor Truck Leasing Plan Announced

CHICAGO—A new plan, under which special-body trucks used in the electrical wholesaling business can be leased without maintenance from four to eight years, has been announced by Wheels, Inc., Chicago, Ill. This equipment, according to a company spokesman, can be leased without full maintenance, repair, and garage service.

Rifle and cannon fire in the "raging battle of the Civil War armies" is simulated with a high-voltage spark and gas when a "correspondent's wagon" trips a photoelectric cell. The wiring which connects the gun to its neon transformer is protected from weather, water, vibration and mud by 3' lengths of ½" Sealtite.

Freedomland keeps outdoor wiring free from potential trouble with SEALTITE FLEXIBLE, LIQUID-TIGHT CONDUIT

Weather, dirt, grime, or vibration cannot halt the "raging battle of the Civil War armies," or black out the festive lights aboard an old-time river boat at Freedomland, the Bronx, N. Y. Why? Because most of the wiring which helps create these and many other special effects at Freedomland is protected by over 2000 feet of Sealtite Conduit.

This strip-wound flexible metal hose with its extruded polyvinyl chloride cover safeguards wiring from moisture and abrasion.

Sealtite is at work in many places—in industry—in large amusement parks, as Freedomland—wherever wiring encounters moisture (even salt spray), movement, weather, oil, chemicals, abrasion. Plan on using Sealtite to avoid down-time and burn-outs.

FOR YOUR CUSTOMERS... be ready to supply Sealtite. They'll ask you for the genuine—the quality conduit printed "Sealtite" and "Anaconda" every foot on the cover. Stock both types of Sealtite—U.A. and E.F.* Available in black or gray—in standard cartons and on nonreturnable reels, at no extra cost. Free Booklet S-542 gives full information on Sealtite. Write: Anaconda Metal Hose, P.O. Box 791, Waterbury 20, Connecticut. In Canada: Anaconda American Brass Limited, New Toronto, Ont. Sealtite is approved by Canadian Standards Association. *Patent Applied For 61144W

CUTAWAY SECTION of Sealtite Type U. A. (Underwriter's Laboratories Approved) shows tough polyvinyl chloride jacket over flexible metal core. Copper conductor wound spirally inside conduit provides positive ground.

Insist on the conduit marked

SEALTITE®

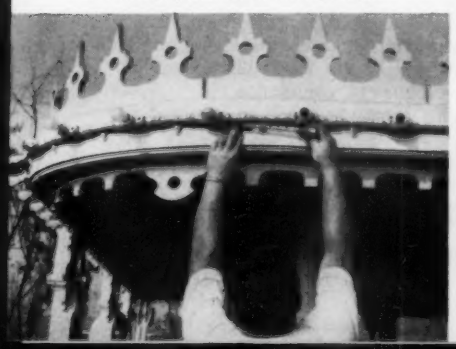
The Original Flexible, Liquid-tight Conduit

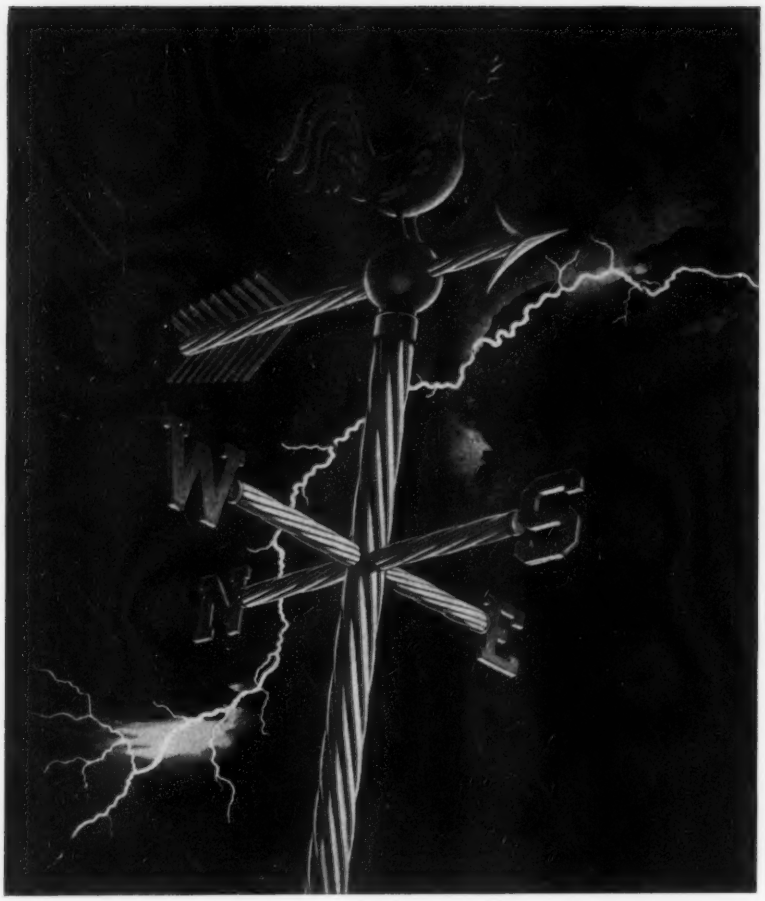
AN ANACONDA® PRODUCT

At night, 180 decorative lights add to the fun and gaiety of this old-time sternwheeler. Sealtite protects interconnecting wiring from the elements because it is liquid-tight—and because its flexibility makes for fast, easy fitting around the curved perimeter of the top deck.

Because the alignment between this primary distribution transformer and the conduit in the concrete slab was not exact, rigid conduit couldn't be used. A 3½' length of 4" Flexible Sealtite neatly solves this problem and gives extra safe protection against the elements.

As cars trip special micro-switches, doors open and close, special effects and animation are actuated, inside this land of American adventure. The 120V switch wiring is exposed to dirt, moisture, and rough treatment, but it's safely protected in flexible ½" Sealtite—and it's easy to move the switches for different effects.





The Galvanized Steel Strand with the built-in raincoat

Everybody talks about the weather . . . CF&I *does* something about it. To protect Galvanized Steel Strand against corrosion, CF&I builds in a zinc coating that shrugs off moisture. The result is a long-lasting, weather-resistant steel strand that is ideal for overhead ground wire and meets ASTM specification A-363.

Also highly suitable for guying assignments, CF&I Galvanized Steel Strand is made in seven- or three-wire constructions . . . in accordance with ASTM specification A-122. In addition, it can be tailor made to meet your particular specifications.

Like all CF&I products, Galvanized Steel Strand is made by a nation-wide company to meet high American standards. For immediate delivery, contact your nearby CF&I sales office. 0132-A

THE COLORADO FUEL AND IRON CORPORATION
Denver • Oakland • New York
Sales offices in All Key Cities

GE Organizes Plan To Avert Antitrust Violations

CHICAGO—Ralph J. Cordiner, chairman of the General Electric Co., has announced a crackdown program to discourage attempts to violate federal price-fixing laws.

Cordiner said the program had been set up to prevent antitrust law violations, such as those evidenced from the recent Philadelphia cases. The GE helmsman made clear his conviction that top management, including himself, was innocent of any knowledge of the illegal acts. On the contrary, he asserted, they were acts of employees who were deliberately involved in violation of long-standing company policy.

The GE plan is considered to be the most extensive program of reform yet announced by any of the 29 companies involved in the recent antitrust case, although Westinghouse Electric Corp. has announced formation of an antitrust division.

• **Public Appeal**—Cordiner has appealed to the general public in behalf of the electrical industry for "an opportunity to prove ourselves once again." He said the case had brought "embarrassment upon everyone associated with the industry." But he declared the overwhelming majority of the people in the companies were innocent. "This sorry experience has reaffirmed some familiar and fundamental lessons," he stated.

Here are the major steps in the GE crackdown program.

• A more penetrating review of operations by lawyers and new auditing techniques to "identify possible clues."

• "More searching questions" at regular executive business reviews. A business review is an interrogation session to which General Electric executives are subjected regularly.

• Intensified "teaching activities" at all levels by company lawyers that Cordiner hopes will "stimulate further management discussions."

Cordiner revealed the program before 1,200 business leaders at the 9th annual Management Conference of the University of Chicago Graduate School of Business and the Executive Program Club. Referring to questions as to why he, as head of the company, did not know what was going on and stop it, Cordiner replied company policy was clear and unequivocal and that some of the company employees involved in the case did appear to have pangs of conscience.

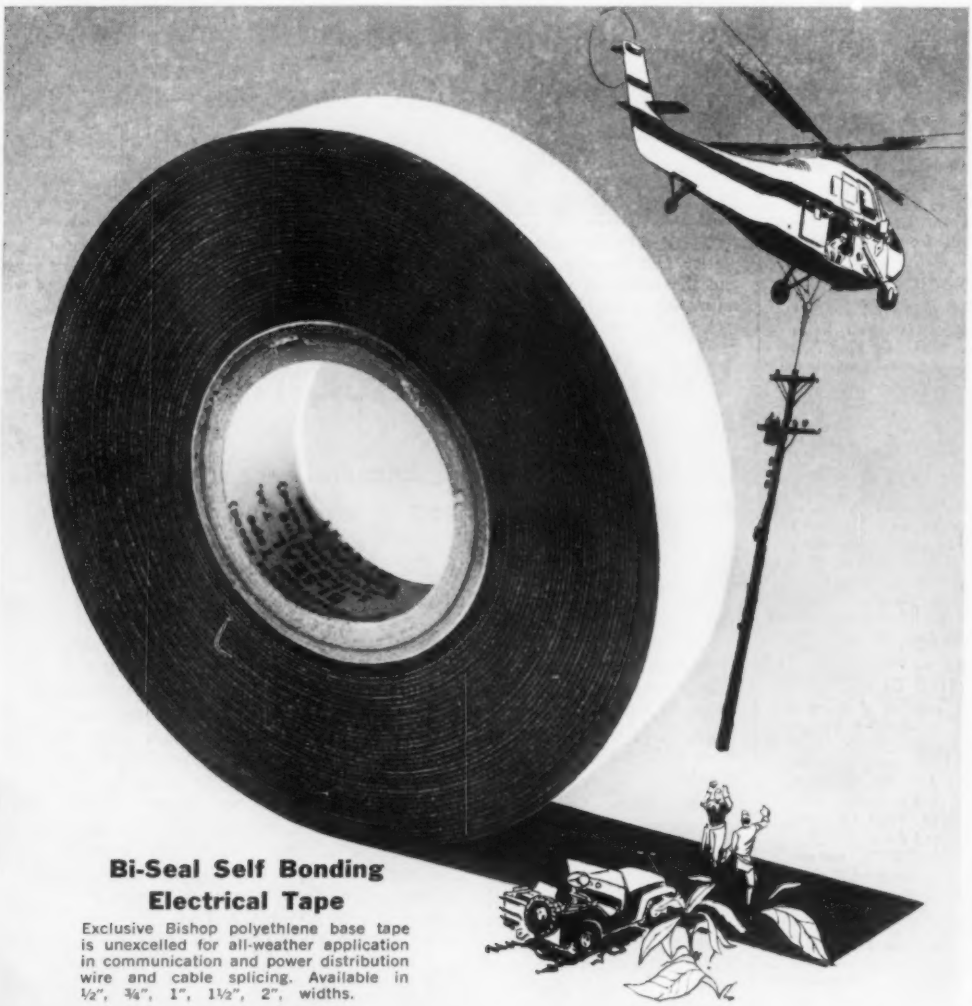
But some, he went on, seemed to feel that they were excused by the necessity of protecting smaller competitors, preventing market demoralization and avoiding price wars.

In 1858, the first Atlantic Cables were insulated with Bishop Gutta Percha.

Today, Bishop answers industry's critical demands . . . from the tropics to polar regions.

This is the world of BISHOP ELECTRICAL INSULATION

114 years of continuous development and service has established Bishop as a leading producer in the electrical insulation field. Bishop's high standard is maintained in a comprehensive line of plastic and synthetic rubber tapes, epoxy compounds for cable splicing and special compounds for cable repair.



Bi-Seal Self Bonding Electrical Tape

Exclusive Bishop polyethlene base tape is unexcelled for all-weather application in communication and power distribution wire and cable splicing. Available in ½", ¾", 1", 1½", 2", widths.

Superior corona and ozone resistance
Fuses into solid mass
Moisture, corrosion and chemical resistant
High dielectric strength
Superior aging and weathering
Long storage life

Write for catalog or specific data.

Other Bishop Tapes

No. 85 All-Climate Vinyl Electrical Tape

No. 30 High Voltage (Butyl) Splicing Tape

No. 125 Electrical (Butyl) Filler Tape

NEOFIL (Neoprene) Electrical Filler Tape

BI-PRENE (Neoprene) Electrical Jacketing Tape

VINYL ELECTRICAL TAPE No. 1 (.007") and No. 2 (.010")

RUBBER TAPE

BISHOP

Manufacturing Corporation, Cedar Grove, Essex County, N. J.

Hi ...THE COMPLETE QUALITY LINE OF

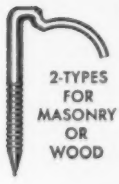
CONDUIT and PIPE CLAMPS

•"TWO-HOLE" SNAP STRAPS

Made of semi-spring steel! They snap on... free both hands for nailing. Cost no more than ordinary straps... easier to use, stay on tight. Rust-resistant! Size and type stamped on every strap. TYPE 1 for E.M.T. and other thinwall conduit. TYPE 2: for rigid conduit and pipe.

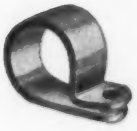
•"ONE-HOLE" SNAP STRAPS

Bump inside strap holds strap firmly on pipe... makes difficult installations easier. Rust-resistant! TWO TYPES: for thinwall... and rigid conduit and pipe. Size stamped on every strap.



•DRIVE-STRAPS

DRIVE 'EM LIKE NAILS... Never loosen... Won't break! Made of strong steel... electroplated! Two types: Verticle Thread for masonry; Annular Thread for wood. Sold in kits and cartons. Sizes ½", ¾" & 1".



•LOOP-TYPE PLASTIC CLAMPS

Many uses as a clamp—strain relief—clip hanger—fastener—strap. CUT COSTS... safe... last longer... no corrosion. Made in 4 materials: Polypropylene, Ethyl Cellulose, Nylon and Saran.

• PLASTIC STRAPS, non-corrosive, 2-hole type. 3 sizes.

•NEW PERFORATED HANGER STRAP

Three finishes: Plain—Galvanized—Copper Coated. Made of best quality steel, 20 ga. x ¾", 10' and 100' coils. Attractive display carton contains 24 single boxed coils.

WRITE FOR NEW "Hi" CATALOG

NAME_____

FIRM_____

ADDRESS_____

CITY_____ STATE_____

Hi HOLUB INDUSTRIES, Inc.

450 ELM ST. • SYCAMORE, ILL.

They put out the fire and . . .

ALTHOUGH this blaze, and its heavy pall of acrid smoke destroyed almost completely Leff Electric, in downtown Cleveland, all the company's records were saved and the electrical wholesaler was back in business in a matter of hours. Loss was estimated at $1,350,000.

We Were Back in Business

Leff Electric, Cleveland, bounced back into business after a $1.3 million fire gutted its office and warehouse.

IT'LL take more than a $1.3 million fire to put Cleveland's Leff Electric Co. out of business for very long. The 40-year old company recently came through a five alarm fire that completely destroyed their nine year-old office and warehouse building at 2341 Payne Ave. on Cleveland's East Side without losing an order or missing a delivery.

• **Fast Move**—As soon as the fire was discovered, the firm "moved" temporarily into a small office across the street from the fire site. Telephone service was in by 5 a.m. the following morning, and the company's 85-man crew went to work to keep operating. Manufacturers were contacted and they immediately started shipping merchandise and filling stock orders. The company sent out letters to all its customers, advising them of the fire and telling them they would continue to meet deliveries and accept orders.

• **Competitors Help**—"The offers of help started pouring in immediately," Phil Leff, president, said. "Not only suppliers, but our competitors were right on the spot, offering any help they could." According to Leff, the competitors really pitched-in. They made deliveries, pickups, and permitted Leff customers to pick up from their warehouses. They kept the operation going while Leff figured out the next move.

• **Fire**—The fire, of undetermined origin, started around 8 p.m. on a cold February night when the temperature was just teasing the 0 degree mark. Flames 40-feet high shot into the air, and more than 20 fire companies worked for two hours to bring the flames almost under control. Dense smoke and foot-thick ice covering the building, sidewalks, hydrants and street hampered the fire fighting efforts, according to eyewitnesses at the scene of the blaze. Loss was estimated by company officials at $1,350,000. Twenty-four hours after the blaze started, firefighters were still on the job, working on small smoldering fires that continued to flare.

• **Records Safe** — Fortunately, the company's records and accounts were stored in a basement storeroom adjacent to the property and were not damaged in the fire, Leff declared. All accounting equipment remained unharmed, accounts and books in order, enabling Leff to remain "in business" despite the loss of the building.

• **Rebound**—The day after the fire, company officers found a building not far away, at 3100 Hamilton Ave., in-

CHIEF STRATEGIST

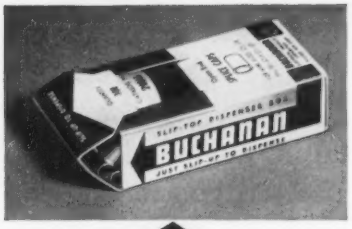
All in one day, you're a strategist, diplomat, purchasing agent, salesman, fortune-teller, banker, tax expert, traffic manager, and counsellor. ¶ No wonder it takes a special kind of guy to go into the electrical wholesaling business! ¶ You're the first to hear when things go wrong for a customer, and often you're the last to hear when they go smoothly. Your job is to give service. Service. Service. Service. ¶ So you surround yourself with the best people, the best products, and the best technical information you can get. ¶ Today you get more backing than ever before, through the combined strengths of Rome and Alcoa. Integrated into a single sales force, our men are ready to apply all their talents and experience to help you solve customer problems and improve sales. Call us when you can use this help. ¶ As you reach for the phone, we'll reach for our hat.

Rome Cable Division of Alcoa, Dept. 17-41, Rome, New York.

ALCOA
ROME CABLE
DIVISION

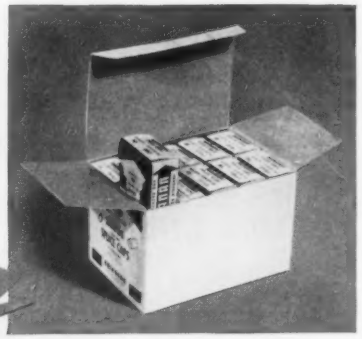
BUCHANAN *SCORES . . .*

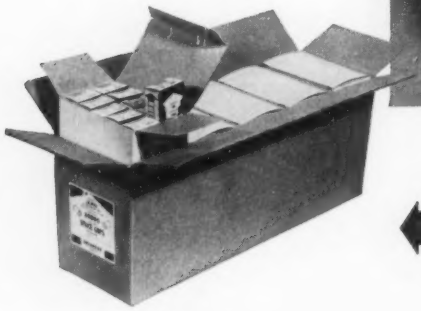
with SMALLER-QUANTITY, MORE-CONVENIENT UNIT PACKAGING of pres-SURE-connectors



50 or 100 Splice Caps or Termend® Lugs in exclusive SLIP-TOP BOXES.* 50 or 100 Insulators in regular packages.*
Perfect units for sales to smaller customers and for use by *all* customers.

10 Unit Boxes in each STANDARD PACKAGE. Speeds filling of orders for 500 or 1,000 or multiples of these quantities.





10 standard packages per SHIPPING CARTON (except 5 standard packages in shipping cartons of large insulators). Simplifies ordering, stocking and selling.

*

ITEM	CATALOG NUMBER	QUANTITY PER PACKAGE		
		UNIT PACKAGE	STANDARD PACKAGE	SHIPPING CARTON
Splice Caps	2006S, 2008S or 2006	100	1,000	10,000
	2011S or 2011	50	500	5,000
Insulators	2007 or 2005	100	1,000	10,000
	2014 or 2012	50	500	2,500
Termend lugs	All 16-8 series	50	500	5,000

HANDIER FOR CONTRACTORS, MAINTENANCE MEN all other users— and YOU!

- ***FOR MORE SALES TO MORE CUSTOMERS . . .***
- **BEST PRODUCTS . . . PREFERRED QUANTITIES . . . BETTER PACKAGES**
- ***SIMPLER TO STOCK AND TO SELL***

See us at the N.A.E.D. Show in Detroit
Write for Bulletin EW5 and distributor information.

BUCHANAN a subsidiary of ESNA

BUCHANAN ELECTRICAL PRODUCTS CORPORATION HILLSIDE, NEW JERSEY
In Canada: ESNA CANADA LIMITED, Toronto 16

REPRESENTATIVES IN 39 CITIES THROUGHOUT THE U.S. AND CANADA

vestigated it, signed a one-year lease and three days later were back doing their own deliveries and taking orders.

Renovating the new 48,000-sq ft office and warehouse building is still underway while the operations of the company continue. A general contractor has been called in and with the help of Leff employees (who worked 12-hour shifts getting the building partially prepared for the move) is moving along on schedule. Renovation is estimated at a cost of between $25,000 to $30,000.

Whether the company will ever move back to its former original site is undecided. According to Leff, "It depends on what it'll cost to rebuild."

Forecast:

Machinery New Orders To Average 2% Below '60

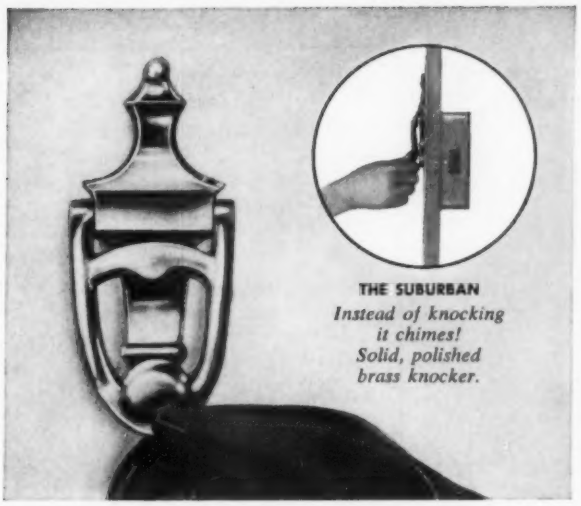
NEW YORK—Capital goods producers cooperating in the new quarterly McGraw-Hill Machinery New Orders Forecast predict that new orders this year will average 2% below last year. The first quarter is expected to be the low point for this year, with new business rolling in at successively higher levels in each of the following quarters. By the last quarter of this year, the index of new orders is expected to average about 9% above the comparable quarter in 1960.

• **Four Out Of Six**—Manufacturers in four of the six individual machinery categories expect their new orders to average lower this year than last and, of the remaining two, one group anticipates an increase while the other sees no change.

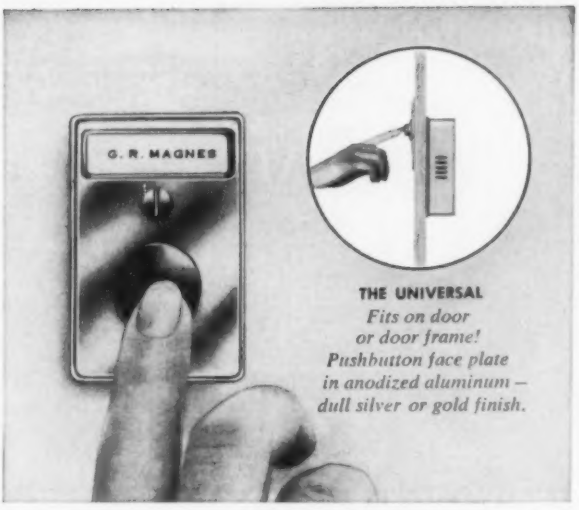
Producers of office machinery predict that 1961 new orders will run 6% higher than last year, and producers of other industrial machinery —general purpose and special purpose industrial machinery—forecast the same level of new business bookings this year as last, at an index level of 150.

In the engines and turbines group, manufacturers predict a 12% decline in new orders this year while pump and compressor makers anticipate a more modest 5% decline. Builders of construction and mining machinery are now thinking in terms of a 7% decline in new business for their products and producers of metalworking machinery believe orders will be off slightly this year—down by 2%.

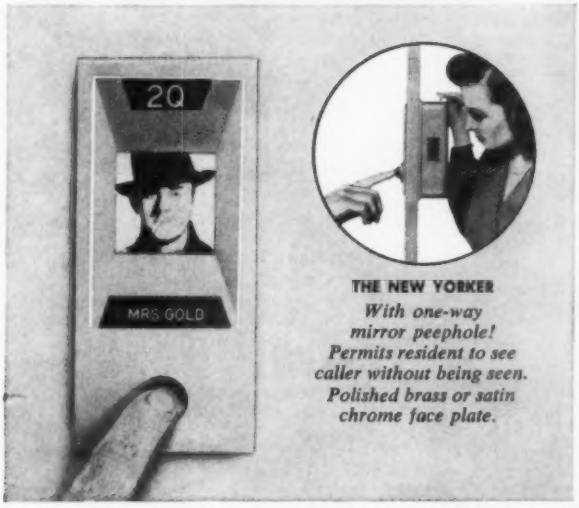
"Targets for Tomorrow in Electric Power" is the theme of the 1961 annual convention of the Edison Electric Institute. The 29th conclave will be held in New York, June 5-7, 1961.



THE SUBURBAN
Instead of knocking it chimes! Solid, polished brass knocker.



THE UNIVERSAL
Fits on door or door frame! Pushbutton face plate in anodized aluminum — dull silver or gold finish.



THE NEW YORKER
With one-way mirror peephole! Permits resident to see caller without being seen. Polished brass or satin chrome face plate.

For each model this small chime box fastens to inside of door and sounds two harmonizing chime notes when actuated mechanically. Light ivory finish.

AuthOtone Non-Electric Door Chimes

add glamour...cut cost of homes and apartments

Today's builder of homes and apartments welcomes equipment which will reduce the cost of construction, and add to his ability to sell or rent faster...and at greater profit. AuthOtone Non-Electric Door Chimes do both!

Available in three popular models AuthOtone Chimes fasten directly to the entrance doors of homes and apartments. They install in a few minutes... and require no electricity, conduit, wire, transformers or batteries. Imagine the saving in labor and materials on a large home or apartment-building development!

But that's not all! AuthOtone Chimes glamorize the dwellings with ear-appealing chime tones and eye-appealing appearance. They dress up the entrance door and even protect the resident (New Yorker Model). No woman can resist them!

All AuthOtone Chimes are inexpensive, and ideal for the "do-it-yourself" home-owner. Installed in more than a million homes and apartments, they will last a lifetime.

So...Chime in on a sound deal! An Auth representative will be delighted to tell you more about these profit-making products.

•

Ask him, too, about Auth "LIFE"-size U.S. approved Apartment House Mail Boxes which do not tear large mail.

Auth SINCE 1892

Auth Electric Company, Inc.

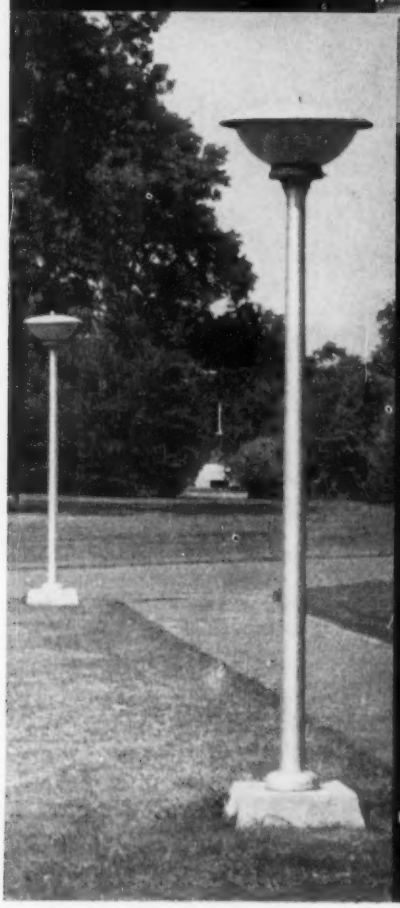
LONG ISLAND CITY 1, NEW YORK

MANUFACTURERS OF APARTMENT HOUSE TELEPHONE SYSTEMS, MAIL BOXES, DOOR CHIMES AND BELL SYSTEMS

MODERN
IN MATERIAL,
IN STYLE,
IN LIGHTING
EFFECTIVENESS

P&K

"PACKAGED"
LIGHTING
aluminum standard
and luminaire



FOR STREET LIGHTING

FOR AREA LIGHTING

It's a fact, P&K lighting standards are modern in total concept: made of aluminum to provide light weight with strength . . . styled in timeless good taste with a functional design that minimizes inventory of parts and speeds installation . . . and most important of all . . . P&K provides the complete "package" to assure the maximum of lighting effectiveness. And of course, handling standards and luminaires from one reliable manufacturer makes your job so much easier. For latest P&K catalog information, ask your P&K representative or write.

AT THE 'N.A.E.D.
CONVENTION
BOOTH 345
COBO HALL

PFAFF & KENDALL
84 Foundry Street
Newark 5, New Jersey
BRANCH SALES OFFICE: SAN JOSE, CALIF.
IN CANADA:
POWERLITE DEVICES, LTD.
Toronto, Montreal, Vancouver

CALENDAR OF EVENTS

April

Electrical Association of Rochester, Inc.
Electric Home Show
War Memorial Building
Rochester, N.Y.
April 8-15

Electrical Industrial Exposition
Elizabeth Armory
Elizabeth, N.J.
April 11, 12, 13

Missouri Valley Electric Association
Annual Engineering Conference
Municipal Auditorium
Kansas City, Mo.
April 12-14

15th New England Electrical Trade Show
Commonwealth Armory
Boston, Mass.
April 18-20

13th Annual S. W. IRE Conference & Electronic Show
Dallas, Texas
April 19-21

Canadian Electrical Distributors Association
1961 Annual Convention
Chateau Frontenac
Quebec City, P. Q.
April 21-25

National Association of Electrical Distributors
53rd Annual Convention
Cobo Hall
Detroit, Mich.
April 29-May 3

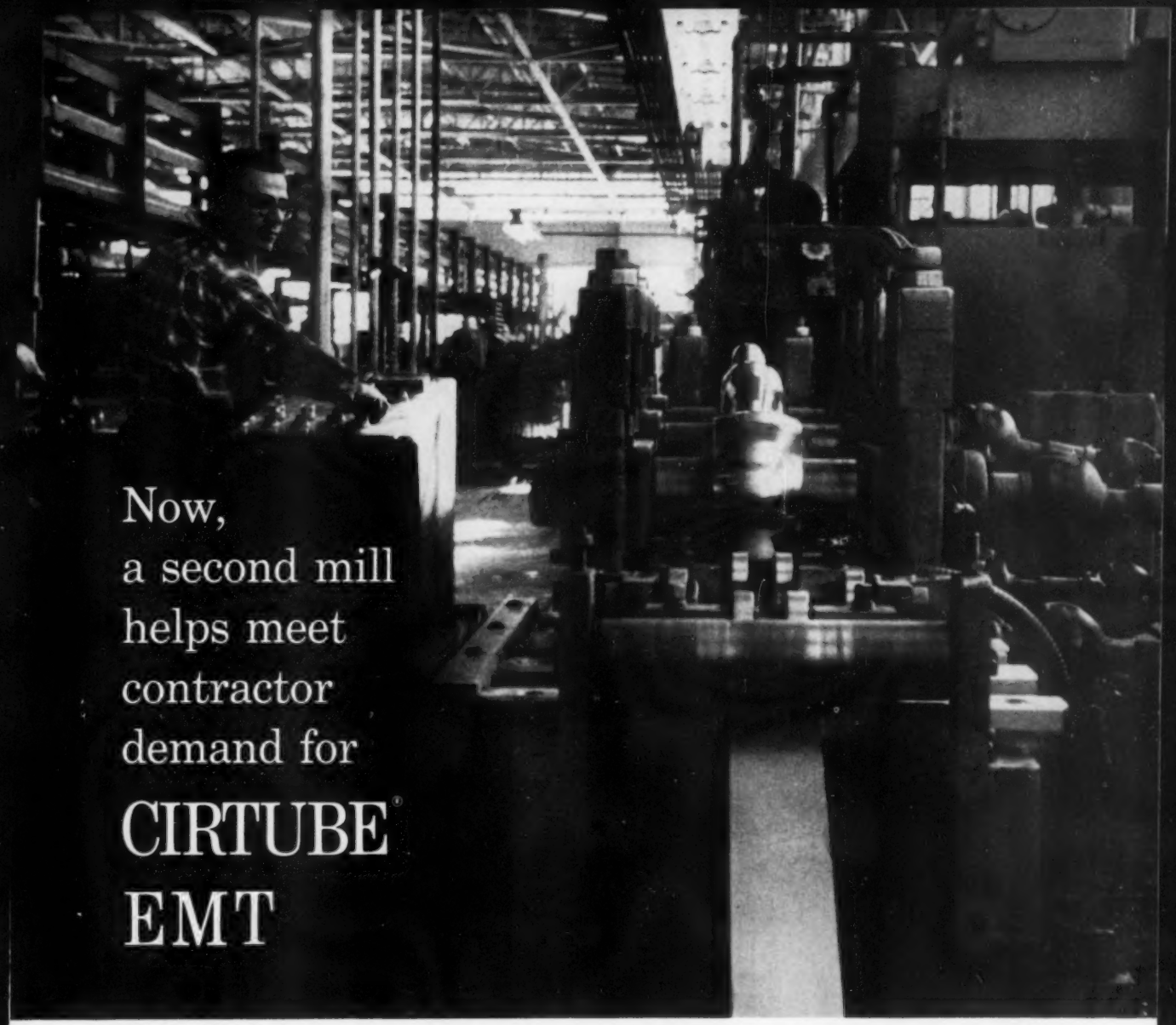
May

Midwest Electrical Industry and Lighting Exposition
McCormick Place
Chicago, Ill.
May 2-4

Eastern Electrical Wholesalers Association
Annual Dinner & Dance
Waldorf-Astoria Hotel
New York, N.Y.
May 6

National Fire Protection Association
Annual Convention
Statler Hotel
Detroit, Mich.
May 15-19

1961 Electronics Parts Distributors Show
Conrad Hilton Hotel
Chicago, Ill.
May 22-24



Now, a second mill helps meet contractor demand for CIRTUBE® EMT

It took contractors a short two and a half years to catch up with the output of the first CIRTUBE EMT mill. Now, a second mill, just recently put into operation, helps meet expanding contractor needs.

Reason for CIRTUBE's quick success? Consistent high quality—from tube to tube, bundle to bundle, month to month—the same easy fishing and bendability, the same good looks. That ...and fast, friendly Circle service.

If you're not yet a CIRTUBE EMT user, be sure to try it on your next job. You...and your men ...will like working with it.

CIRCLE WIRE & CABLE CORP.

SUBSIDIARY OF **CERRO CORPORATION**

PLANTS: Maspeth and Hicksville, N. Y. **SALES OFFICES & WAREHOUSES:** In all principal cities.

Rubber Covered Wires & Cables • Varnished Cambric Cables • Plastic Insulated Cables • Neoprene Sheathed Cables • "CIRTUBE" EMT

CIRTUBE EMT *Ask for it!*

NEW 4-WAY POCKET TOOL

that'll do a first-class job of selling itself!

a real "working partner" for removing backs of TV sets and installing antennas

1 It's a 1/4" nut driver! Fits Parker-Kalon screws.
Genuine Xcelite plastic handle — shaped and balanced for working ease. Equipped with pocket clip.
2 It's a 7/16" nut driver! Ideal for antenna installations.
3 It's a No. 1 Phillips screwdriver!
Double-end blade inserts in 7/16" hex opening. Just push it in or pull it out! Patented spring holds it firm.
4 It's a 3/16" slotted screwdriver!

Put "No. 600" on display right away! Merchandising card (easeled and punched) holds ten.

XCELITE

XCELITE, INC. • ORCHARD PARK, N.Y.
Canada: Charles W. Pointon, Ltd., Toronto, Ont.

MARKETING AIDS

"On the Road" Display is Sales Builder

Bryant introduces display on wheels for distributors.

DISTRIBUTORS of Bryant Electric Co.'s line of electrical devices now have the opportunity to show the line to customers, merely by contacting a company representative and arranging for a scheduled date to have the manufacturer display one of its three "traveling showrooms."

• **Product Display**—The first, in the fleet of three, took to the road last month. Built into the body of a Chevrolet Corvair 95, the mobile display consists of four sets of panels on which the products are mounted. Resembling books in a bookcase, these dual panels pull out of the side of the van and then are opened up. Each panel is integrally illuminated, and such units as wall switches are operational.

The versatility of the display is demonstrated by the fact that the panels can be individually detached from the van, mounted on A-frames, and used in conjunction with a booth at industrial shows. Its main purpose, however, is to help the manufacturer's distributors in various parts of the country show the line to their customers.

• **Self-Sufficient** — Except for the need for external power, the traveling showroom is completely self-sufficient. There is room in the rear for literature, samples, tools, the A-frames, legs, etc. The front end of each panel is fitted with a leveling device for the leg, so that adjustment can be made to all variations in terrain. Featured on the panels are the sample units, promotional copy, and examples of applications. Panels are given over individually to one particular product line or "family" group.

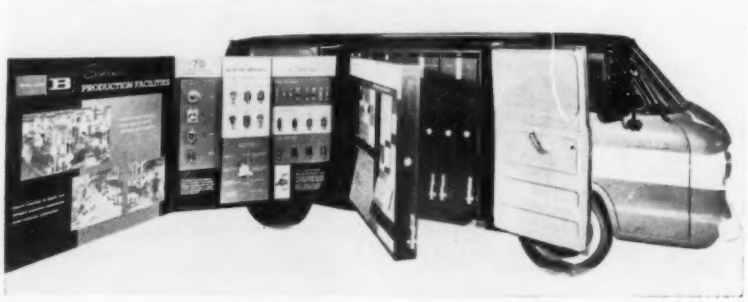
• **Panels**—Seven of the eight panels measure 46-in wide x 42⅛-in high x 5¼-in deep and the eighth panel is 6-in deep because it opens up into three display boards, one of which pictures the manufacturer's production facilities.

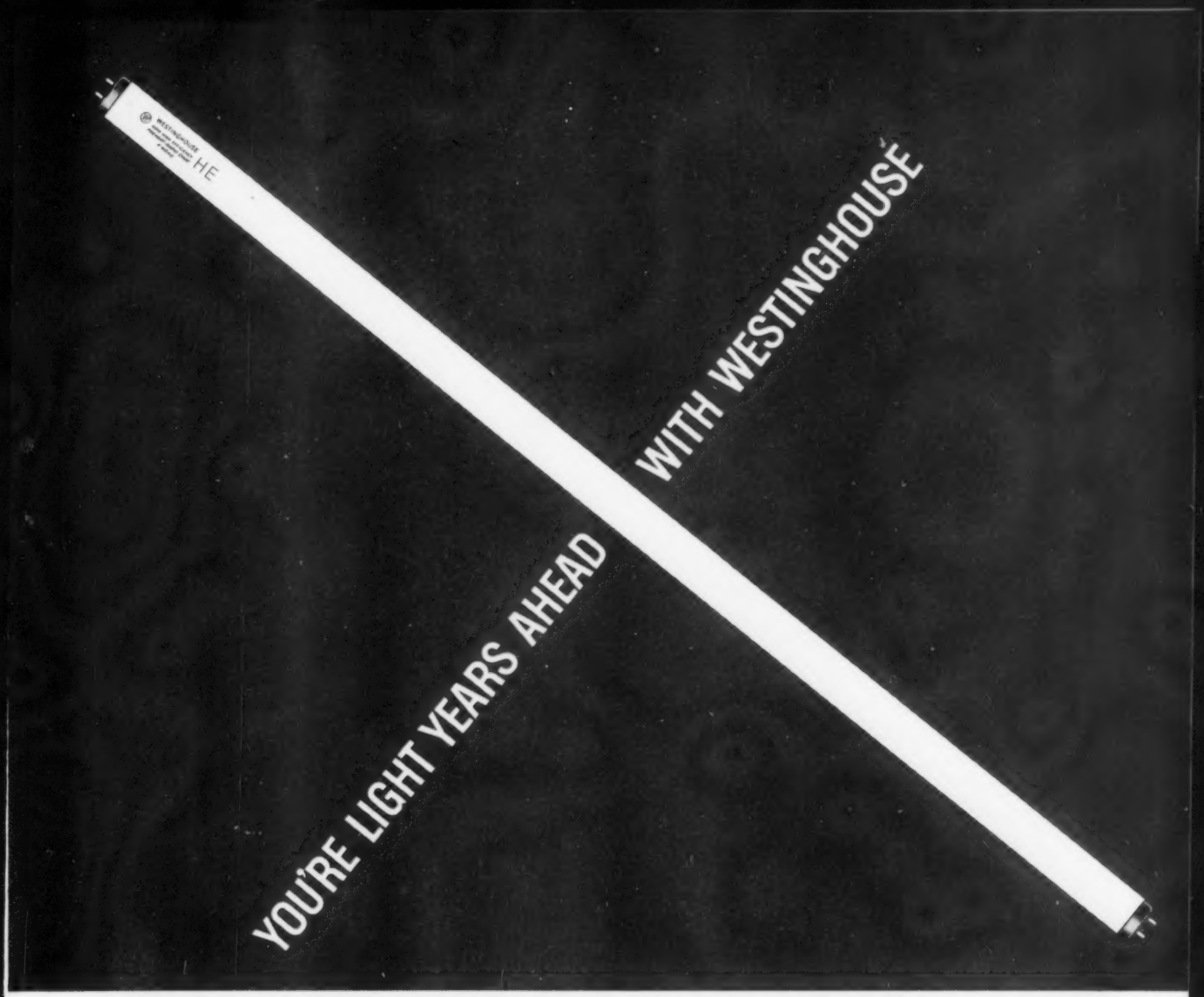
After the two side doors of the van have been opened and swung back, the overall box is rolled out on a set of four heavy-duty casters which ride on a track. A "stop" in the track is located at the point where it is safe to open the panels without interfering with the doors of the truck.

Each panel is mounted on a vertical rod with gears at top and bottom which mesh into a track.

The exterior of the van is painted in the manufacturer's colors of red, white and black.

* * *





NEW WESTINGHOUSE HIGH-EFFICIENCY LAMPS GIVE YOU ⅓ MORE LIGHT AT NO EXTRA COST AND YOU DON'T HAVE TO CHANGE FIXTURES!

Now you can increase lighting levels without changing a single fixture . . . without increasing power costs . . . and without paying premium lamp prices. New Westinghouse "High Efficiency" fluorescent lamps give you a full third more light than daylight lamps . . . and 15% more light than cool white lamps . . . without consuming an extra watt of power!

"H.E." lamps are so new even the color tint is different—and only Westinghouse has it! A special blend of phosphor particles coating the inside of each lamp provides the higher lumen output . . . with a pleasant and restful green tint. Users everywhere feel this new green-white light gives a softer, more comfortable light . . . the most efficient working light yet. Try "H.E." lamps in an entire area. If you don't agree that they provide the most efficient light ever, we will gladly exchange them for any Westinghouse fluorescent, any color shade, of your choice!

With "H.E." and other Westinghouse lamps, the Westinghouse Lighting Cost Reduction Plan gives you one or more of these benefits:

1. **Reduced cost of lamp purchases!**
2. **Reduced lamp replacement labor costs!**
3. **Increased lighting level for the same or lower costs!**
4. **More efficient use of power!**

Order new Westinghouse "H.E." lamps today and get more information on the Lighting Cost Reduction Plan from your authorized Westinghouse Lamp Agent or your nearest Westinghouse Lamp Sales Office! *You can be sure...If it's Westinghouse.*

Westinghouse

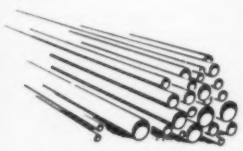
Westinghouse Lamp Division, Westinghouse Electric Corporation, Bloomfield 2, N.J.

WHY THE DEMAND FOR KRALOY CONDUIT?

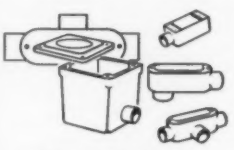
Corrosive gases, liquids, vapors or electrolytic action will not corrode a Kraloy Rigid PVC raceway. Kraloy is from 18% to 30% faster to install than any metallic conduit, and conductor pulling requires far less time and energy. Conductors are more than amply protected from crushing and impact. Conduit is U/L listed for underground burial or encasement in concrete, will not support combustion, and will not spark. Your Kraloy representative will elaborate on the above features, or write

Kraloy/Chemtrol Co., Electrical Conduit Division, 402 W. Central Ave., Santa Ana, Calif.

QUALITY PLASTIC PRODUCTS FOR INDUSTRY
KRALOY CHEMTROL CO



KRALOY ELECTRICAL CONDUIT



KRALET ELECTRICAL ACCESSORIES

NRECA Holds 19th Annual Meeting In Dallas

DALLAS, Tex.—"After eight years of dim-out under threats of high interest rates and being forced into Wall Street financing, the New Frontier opens before us," Sen. W. Yarborough (Dem., Tex.) told members attending the 19th annual meeting of the National Rural Electric Cooperative Association, recently in this city. Some 8,000 persons representing 962 rural electric cooperatives attended the four-day event.

Underlining the observation by a parade of speakers that "the climate in Washington has changed for the better" was a letter to the convention from President John Kennedy which affirmed: ". . . We are going to move ahead with multi-purpose river development. We shall seek a way to link rivers. We are going to make new starts now on reclamation projects. . . . We shall seek ways to assure an abundant supply of electric power at the lowest possible cost for all rural people, and to help people to use that power effectively to raise productivity and their standard of living. . . . "

NRECA president Walter Harrison warned the group that while "there is hardly room for many more rural electric cooperatives in America, since 97% of all farms, now enjoy central station power, we are still at the mercy of the profit-hungry private utility interests without additional sources of power."

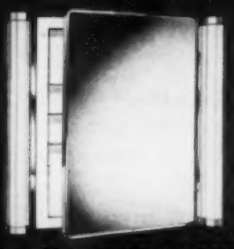
Clyde T. Ellis, NRECA general manager, also cited rural redevelopment, wholesale power supply and territorial protection as critical problems calling for major efforts. Even more foreboding than the problems of power supply and piracy, he asserted, is the chronic depression of the agricultural base on which the program has rested. Rural electrics now have more than 400,000 idle services on their lines, and almost a third of a billion dollars invested in now useless facilities, Ellis pointed out. On individual systems in the most depressed areas, the number of idle services is often more than 20%, he stated.

Pittsburgh Distributor Opens Consulting Firm

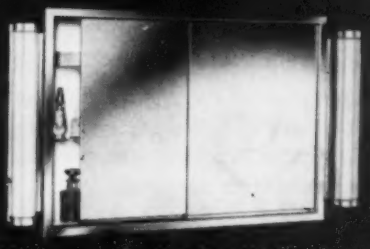
PITTSBURGH — I. W. "Wally" Sigal, former president of Wally Electrical Supply Co., in this city, has announced the formation of a new business consulting firm. The firm is known as SECCO Associates. The company has established headquarters at 119 Federal St.

Sell the cabinet with the fixtures for that extra chunk of bathroom profits . . .

the Duette Custom



Miami Master Model 2030-31



the Duette Duchess

MIAMI-CAREY LIGHTED BATHROOM CABINETS

—the most complete, easiest-to-sell cabinet line ever designed

• overhead or side-light fluorescent fixtures • fixtures pre-attached at factory
• completely wired for quick installation

TAKE THE FIRST STEP toward greater bathroom profits! Write EH-1060 for the 28-page Miami-Carey catalog, "Glorifying the American Bathroom". See the complete line of popular Miami-Carey Mirror-Cabinet Units. Stock them. Sell them. They will mean MORE SALES FOR YOU!

MIAMI Carey®

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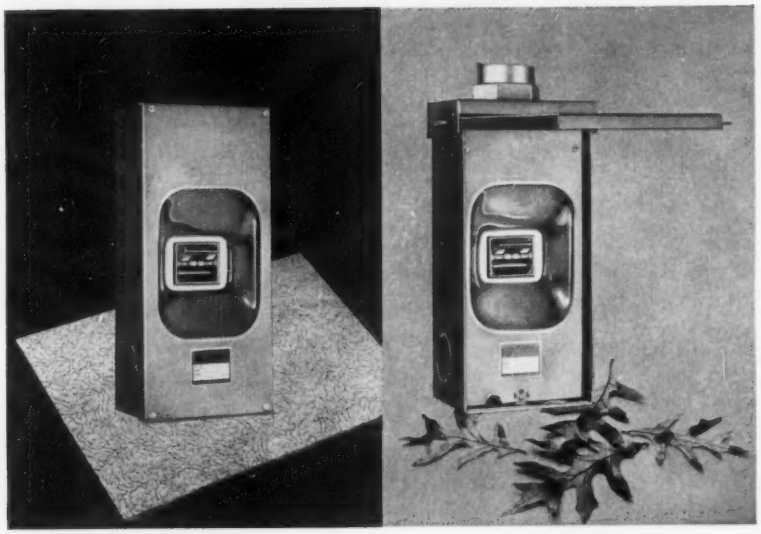
THE PHILIP CAREY MFG. COMPANY • MIDDLETOWN, OHIO

NEW...FROM HEINEMANN



200 AMP SERVICE ENTRANCE EQUIPMENT

. . . small box
. . . big breaker

Customers looking for more electrical power will find a lot to like in this unit. Capacity is a full 200 amperes. "Full" because the Heinemann hydraulic-magnetic breaker makes de-rating as obsolete as yesterday's weather forecast. You can put this equipment next to heat lines, or let it sizzle in the summer sun. It always carries full rated current, always trips as specified. No thermal elements . . . no temperature-caused nuisance tripping.

Installation? Painless. There's enough space inside for two hands *and* wire. Solderless screw-type connectors save time and trouble. Knockouts are plentiful, placed so conduit can be run-in from any angle.

Cost? A little less than you are used to paying for equipment that supplies equal capacity *after de-rating.*

The size is another pleasant surprise . . . slightly smaller than fused pull-outs of the same rating. The equipment is rated at 120/240V AC, two- or three-wire service, and is available in indoor or raintight, tamperproof outdoor enclosures of heavy-gauge steel.

MORE QUESTIONS? SEND FOR BULLETIN 1003

HEINEMANN
ELECTRIC COMPANY
152 Plum Street, Trenton, N. J.

Circuit breakers

S.A. 2044

Business Outlook:

On the Rise Again As Upturn Begins

Here is the present report on business as prepared by the McGraw-Hill Dept. of Economics.

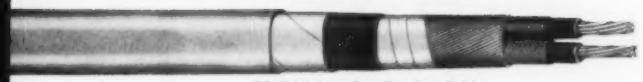
BUSINESS, as a whole, is better than the recent alarming headlines suggest. The truth is that our economy is operating quite a bit below full capacity, both in production and employment. Nevertheless, the current business set-back is somewhat milder than any of the other three postwar adjustments. **The total volume of business as measured by the Gross National Product, is now off about 1% from its record high level in the second quarter of 1960.** The total volume of industrial production—manufacturing, mining and utilities—as measured by the Federal Reserve Board's index of output, is off by about 9% from its peak in January 1960. And personal income is less than 1% lower than the high mark of last October.

High Rate

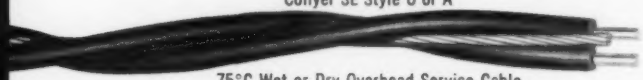
Despite the drop in business our present rate of economic activity is high by almost any historical standard. Furthermore, both U.S. business, as a whole, and industrial production are likely to move at least moderately upward this spring. But all segments of the economy are not likely to be moving upwards together in the next few months any more than they moved down together. The U.S. Department of Commerce and the Securities and Exchange Commission's survey of business' plans for new plant and equipment, taken in January and February confirms the results of the McGraw-Hill fall survey released last November. Our fall check-up on investment plans indicated that business planned a 3% drop in capital spending for 1961, exactly the same percentage as shown by the current government survey. Both our survey and the Commerce Department-SEC survey clearly indicate that a turn-around in investment in new facilities is in the cards during 1961—**but not until the second half of the year.**

Another important piece of news about capital investment prospects turned up a few days ago. The McGraw-Hill Machinery New Orders Index, based on the new incoming business of a very large segment of the machinery manufacturing industry, **rose in January for the first time in six months.** One swallow doesn't make a summer nor does a one-month rise

SERVICE CABLE

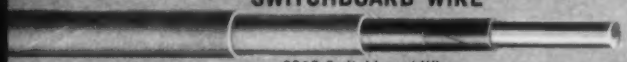


75°C Wet or Dry Service Cable
Collyer SE Style U or A



75°C Wet or Dry Overhead Service Cable
Collyer Neutral Supported Service Cable

SWITCHBOARD WIRE



90°C Switchboard Wire
Collyer Type AVB

90°C Switchboard Wire
Collyer Type TA

CONTROL CABLE

75°C Wet or Dry Small Diameter Control Cable
Collyer C-141 (Polyethylene, Nylon, PVC)

75°C Wet or Dry RR Ozone Resisting Control Cable
Collyer RR Control Cable (Oil Base Insulation)

PORTABLE CABLES

Portable Power Cords
Collyer SJ or SJO Light Duty
Collyer S or SO Heavy Duty

Heavy Duty Without Ground
Collyer Type W

Heavy Duty With Ground
Collyer Type G

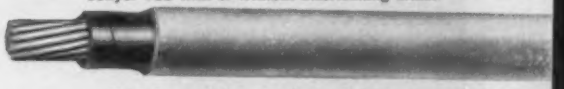
DISTRIBUTION • BRANCH CIRCUITS • FEEDERS

75°C Wet or Dry Building Wire
Collyer RHW

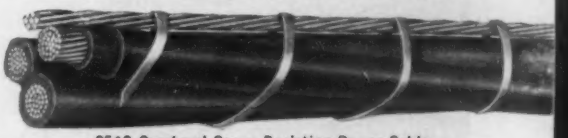
75°C Wet or Dry RR Power Cable
Collyer Style RR (RHW Insulation)

85°C Wet or Dry — RR Ozone Resisting Power Cable
Collyer Style RR (Butyl Insulation)

75°C Power Cable, Dry Locations
Collyer VCB with or without interlocking armor



75°C Power Cable, Wet or Dry Locations
Collyer VCL with or without protective neoprene sheath



85°C Overhead Ozone Resisting Power Cable
Collyer Self-Supporting Aerial Cable (Butyl Insulation)

110°C Power Cable, Dry Locations
Collyer Type AVA

110°C Power Cable — Collyer Type AVL

150°C Power Cable — Collyer Silicone Power Cable

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97 Heath Street

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D. S. Davis & Company
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Kilkenny Company
1729 Superior Avenue N.E.

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1901 Griffin Street

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R. L. Brown Associates
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Henderson Sales Company
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SALT LAKE CITY 15, UTAH
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SAN FRANCISCO, CALIFORNIA
The Baxter Company
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Subsidiary of American Machine & Foundry Company
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Subsidiary of American Machine & Foundry Company
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Time is money... control it with Paragon

in machinery new orders mean that the machinery industry is beginning the long pull to get capital goods out of the doldrums. But add this latest upturn in orders to the fact that machinery orders did not drop very far during the last half of 1960, and we have a relatively bright picture for this segment of the capital goods industry.

As we see it, the economy is undergoing a mild recession at present with a relatively high degree of prosperity.

• **Sustained Growth** —Actually, the main problem facing us today is not one of giving a short-term lift to a sagging economy but of getting us back on the postwar growth curve of about 4% per year. For well over three years we have fallen short of our normal position on the growth line. Our success in world politics may well depend upon our once more attaining a sustained economic growth rate between 3½ and 4½% per year.

• **Business Action**—To meet a growing demand for goods here and abroad, American business will shortly need far more efficient plant and equipment than it has today. Industry should step up installation of cost-reducing machinery before inflation resumes its upward course. Industry has been modernizing its facilities, but huge amounts of antique equipment are still in use. It must do much more in this line to do business in a competitive economic environment.

Business should increase sharply its expenditures on research and development if we are to have new and better products in the mid-1960s. It takes about five years, on the average, from the time research is begun until the resulting product can be marketed. Instead of stepping up its rate of spending on R and D, industry has been cutting its *rate* of annual increase in these expenditures. In 1956, expenditures on research and development rose about 25%. In 1957 the gain dipped to about 20%; in 1958 to 12%; in 1959 to 10%; and in 1960 to only 6% more than 1959.

Companies with cost-reduction programs, new products and increased sales efforts will be the most profitable in the 1960s. Companies that fail to prepare for growth will not compete profitably.

• **Government Action** — Government has substantially more to do than the business community in preparing for long-term growth. Business has been doing something in recent years to modernize its facilities, but the federal government has lagged behind with regard to desirable public works. Many federal programs never got off the mark because the private economy generally operated at a very high level throughout the postwar period. There

are many public projects which could be started and which would contribute to the nation's long-term growth. These include cleaning up polluted streams, smog-filled air and city slum areas. Furthermore, we, as a nation, should begin to take seriously the problem of inadequate water resources. Unless we develop these resources, water shortage may become a major deterrent to industrial expansion.

Defense will cost more in the future even if we eliminate the duplication of effort among the Armed Services. Let us hope that the tremendous volume of R and D being done on missiles and anti-missiles will give us the chance to make predictions of America's future growth come true.

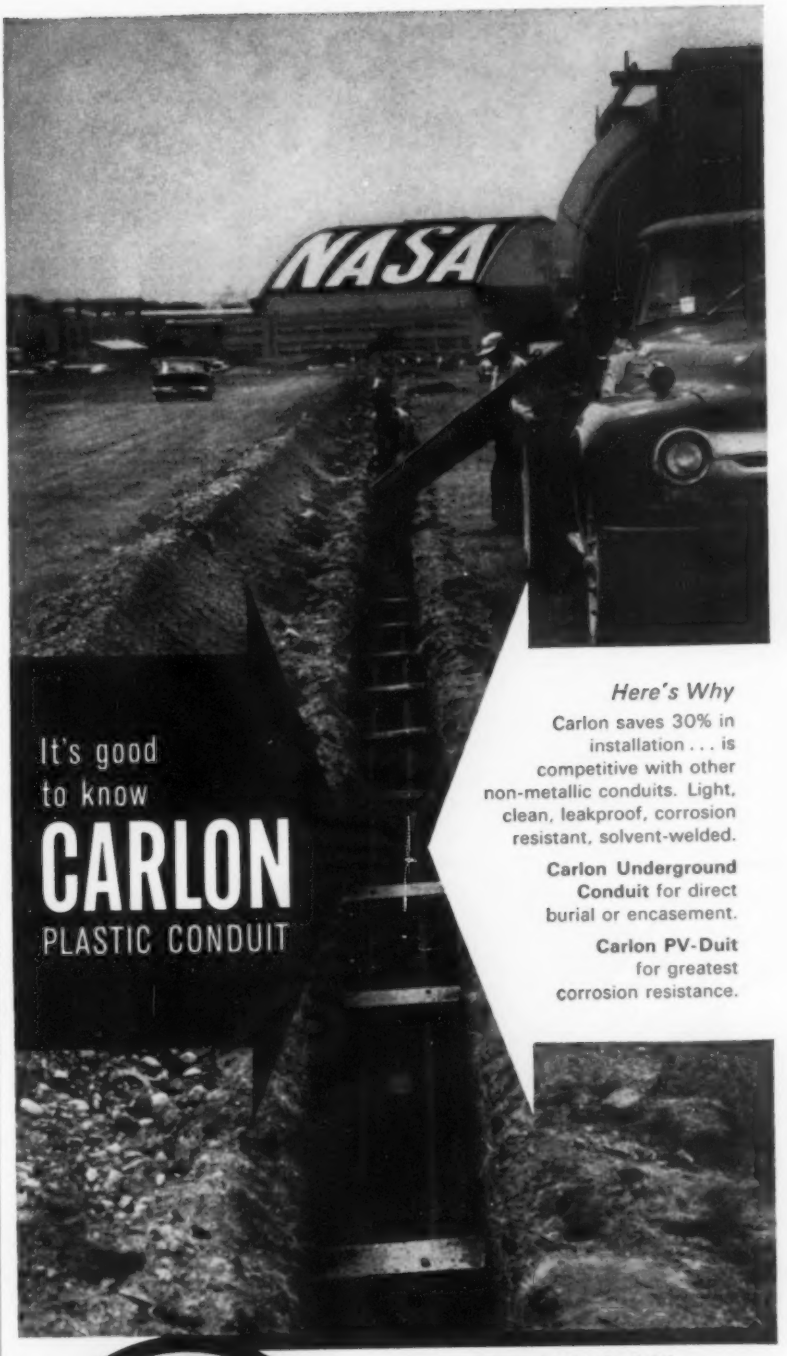
We need more from government now than a spending spree. Few government programs mentioned above would get going quickly. Nor would they increase government spending by very much in the current calendar year. We need assurance that the government has a program to support sustained national growth. We need tax reform to promote private investment in new producing facilities, not just a random tax cut.

We do not need a panacea for ending what appears to be our mildest postwar recession. We do need to regain the rapid growth rate that has been lost in the past few years. This will call for planning by government and private enterprise at least as long range as its equivalent in Russia. Whatever steps are taken by the Administration, the current recession will soon end. The problem of long-range growth will still be with us when business indicators show that the recession is a thing of the past.

FTC Charges American-Marietta On Antitrust

WASHINGTON, D.C.—The Federal Trade Commission has charged American-Marietta Co., Chicago, Ill. with violating the antitrust laws by acquiring numerous corporations from coast to coast in several product fields. The FTC's complaint lists almost 50 acquisitions and alleges they violate Section 7 of the amended Clayton Act (the antimerger law) because they may result in a substantial lessening of competition or tendency to create a monopoly in various sections of the country in various lines of commerce including the following:

• the concrete pipe industry as a whole; the production and sale of concrete sewer pipe; the production and sale of concrete pressure pipe; the production and sale of cement; the production and sale of construction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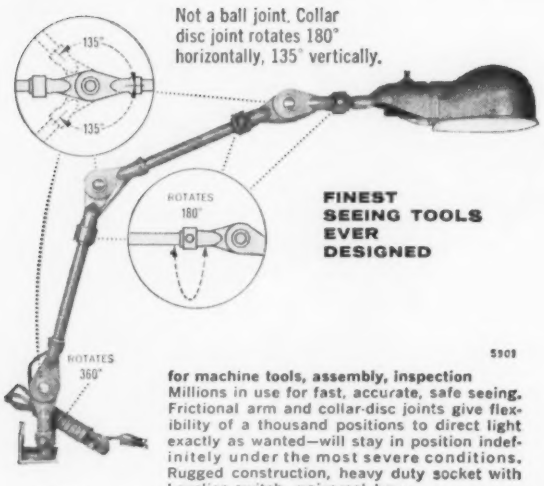

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aggregates such as sand, gravel and crushed stone; the production and sale of lime.

The complaint also alleges that American-Marietta's constant and systematic elimination of actual and potential competitors through these acquisitions has injured the public and is an unfair method of competition forbidden by Section 5 of the FTC Act.

Through the listed acquisitions, the complaint states, American-Marietta has become one of the largest, if not the largest, manufacturer of concrete pipe in the United States, one of the largest cement producers, and a major producer and marketer of lime and construction aggregates. The complaint contends that as a result of the concrete pipe acquisitions, industry concentration has been or may be substantially increased, and American-Marietta has materially improved its competitive position and is better able to inhibit entry by new producers.

Robert E. Pflaumer, president, American-Marietta has denied the charges in the FTC complaint. The firm recently purchased Duro Fittings Co., Los Angeles, Calif.

PEOPLE IN THE NEWS

Frank P. Goodwin has been elected president of **Interstate Electric Company** of New Orleans. He was formerly vice president and general manager of the firm's Shreveport, La. division.

Donald F. Dimock has been appointed sales manager of contractor and industrial sales of **Allied Electric Supply Co.,** Pittsburgh, Pa. Dimock formerly was associated with National Electric Products Co., Ambridge, Pa.

William E. Wilton has been elected executive vice president of **Jasper Blackburn Corp.,** St. Louis, Mo. Wilton was formerly vice president in charge of engineering and manufacturing.

Donald A. Wildauer has been appointed mid-Atlantic district manager for **Edwards Co., Inc.,** Norwalk, Conn. Wildauer will guide sales efforts in the Washington, D.C., Maryland, Virginia, eastern Pennsylvania, southern New Jersey area.

Alfred H. Macgillivray has been appointed works manager of the **Rockbestos Wire & Cable Co., division of Cerro Corp.** He will have charge of plant engineering, production, personnel and purchasing.

Gordon Auth has been appointed director of Product Engineering by the **Auth Electric Co., Inc.,** Long Island City, N.Y. He will supervise research and product development activities.

George S. Watts, vice president of the **Edwin F. Guth Co.,** St. Louis, retired on March 1st after more than 50 years of service.

C. W. McDaniel has been appointed director of sales for all electrical products of the **Fostoria Corporation** of Fostoria, Ohio. He will direct sales efforts of company personnel as well as representatives throughout the nation.

Robert L. Zell has been appointed area representative for **Edwards Co., Inc.** He was formerly the company's St. Louis district manager. He will guide sales throughout southern Illinois, central Missouri, and western Kentucky.

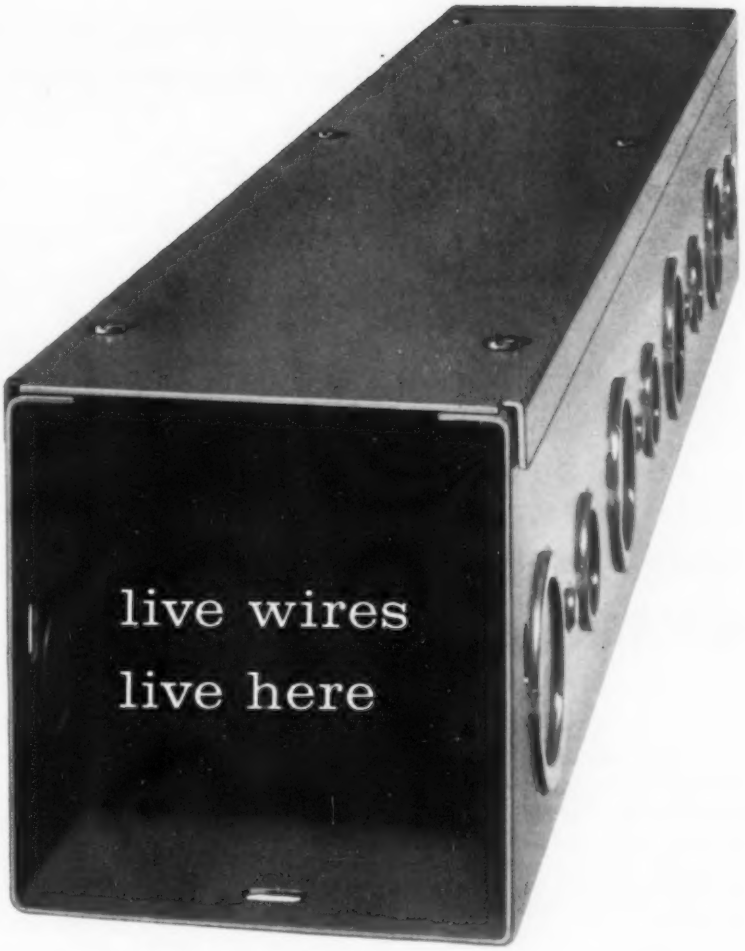
Max E. Doney has been named district sales manager for the new Cincinnati district of the **Lighting Products Div., Sylvania Electric Products Inc.** The new Cincinnati district will consist of trading areas formerly included under Chicago, St. Louis, and Cleveland districts.

James W. Hudson has joined **Square D Company** as manager-underfloor duct planning in its Distribution Equipment Div., Lex., Ky. He formerly headed his own firm, **Hudson Electric Co.,** a sales organization for electrical products with headquarters in Elmhurst, Ill.

Lloyd George has been appointed West Coast sales representative of **Diamond Expansion Bolt Co., Inc.,** Garwood, N.J. He will assume sales responsibilities in San Francisco and northern California.

Robert C. Bennett, Jr., president of **Wheatland Electric Products Co.,** Carnegie, Pa., has been elected a director of Alarmos De Mexico, S. A., Mexico City, Mexico. The south of the border firm manufactures alarm systems, emergency lighting and electrical products.

Wallace T. Rouse has been named manager of engineering for the Ft. Atkinson, Wis., residential fixture manufacturing plant of **Thomas Industries Inc.,** Louisville, Ky. He will have charge of new product research and development and production line engineering at the Ft. Atkinson plant.



Lots of live wires depend on the protection of Keystone wireways and auxiliary fittings. Quality features such as a completely open 'lay-in' design for fast, careful installation of wires, folded covers for added rigidity and interior screw tip shields—all help to keep electrical wiring *alive and well . . . permanently.*

Keystone has standard or galvanized wireways and fittings stocked in all types, shapes and sizes . . . ready for immediate delivery.

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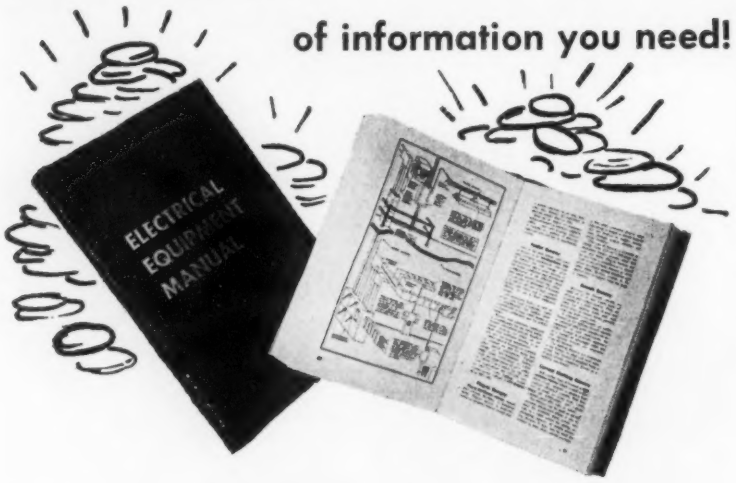
A GOLD MINE . . .



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Second Edition

by J. F. McPartland and W. J. Novak

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COMPANY NAME AND ADDRESS_____

Walter R. Clarke has been appointed to the newly created position of product manager in the marketing division of **Square D Co.**, Park Ridge, Ill.

Joseph R. Ray has been appointed vice president in charge of sales of **Curtis AllBrite Lighting, Inc.**, Chicago, Ill. He formerly was general sales manager.

H. Donald Nelson has been appointed district sales manager in Kansas, Nebraska and western Missouri for **General Electric** electronic components, Kansas City, Mo.

Harry Johnson has been elected vice-president, purchasing and **Charles J. Beck**, elected assistant treasurer and controller of **Continental Electric Equipment Co.**, Cincinnati. Johnson has been associated with the firm for ten years in the positions of works manager and assistant to the president.

William H. Lewis has been named advertising and sales promotion manager for **Albion Div., McGraw-Edison Co.** He replaces **Robert Marbach** who has been transferred to another company division.

William A. Castic has been appointed assistant manager-lighting sales **The Pyle-National Co.**, Chicago, Ill. Castic was formerly field-engineer-lighting for both the Pyle-National Company and its Steber Div.

NEW LITERATURE

Vertical Motors—Application information and mechanical features of vertical motors are discussed in a new 2-page bulletin No. 1485, available from Century Electric Co., St. Louis, Mo.

Electric Heat—Sixteen page catalog is available from Edwin L. Wiegand Co., 7500 Thomas Blvd., Pittsburgh 8, Pa., which describes electric comfort heating equipment. Valuable application and product information is included in catalog 975-D for solving residential, commercial and industrial heating problems. Each equipment item is covered with explanatory copy, illustrations, dimensions, engineering and application data.

New Products—Twelve new products are described in new 36-page, pocket size catalog being distributed by Holub Industries, Inc., Sycamore, Ill. Catalog includes specifications and descriptive information.

Lighting—A comprehensive catalog of distinctive lighting fixtures for interior and exterior home use is available from Del-Val Manufacturing Co., 519 W. Huntingdon St., Philadelphia 33, Pa.

Leased Lighting—Outdoor applications for leased lighting is described in new 2-page booklet available from Westinghouse Lighting Div., Westinghouse Electric Corp., Edgewater Park, Cleveland, Ohio. Write for booklet SA-8866. Also available is booklet SA 8868 describing line of surface-mounted luminaires. Six-page publication shows typical applications and points out various features of the fixtures.

Traction Motors—Four-page bulletin lists features and advantages of 6⅝-in diameter "JB" traction motors for low-voltage dc electric vehicles. Motors described are rated ¾ to 3-hp, 12-36-v, dc. Bulletin GEA-7309 is available from General Electric Co., Schenectady 5, N.Y. Also available is Bulletin 617C on *How To Select And Apply Floodlights*. The 16-page bulletin, revised, is a comprehensive outline of the essentials of efficient, economical floodlighting. Bulletin GEA-7312, 12 pages, describes the company's line of limit switches for automatic pilot control.

Tubes—A new industrial replacement guide is available from Sylvania Electric Products Inc. To assist distributors select proper replacements, code symbols for more than 35 industrial tube manufacturers are listed in concise, easy-to-read tabular form. Copies may be obtained from Sylvania Electric Products Inc., 1100 Main St., Buffalo 9, N.Y.

Signaling Equipment—New 30-page catalog BSM describes electrical signaling equipment, annunciators, and bell systems. Booklet is available from Auth Electric Co. Inc., 34-20 45th St., Long Island City 1, N.Y.

Fastener Guide—Four-page fastener guide is being offered by Diamond Expansion Bolt Co., Inc., Garwood, N.J. In easy-to-use chart form, brochure provides all data needed to select right fastener for any application. Also includes information on masonry drills.

Adjustable Speed Drive—Six-page bulletin No. 2900 outlines line of adjustable speed drives for applications in the ¾ to 2500-hp range. Bulletin, available from The Louis Allis Co., Milwaukee, Wis. describes four types of drives and gives details on available ratings, speed ranges, associated controls, and modifications.

Standard Models in stock

Just look at the SIZE of our latest *Hoffman*

Electrical Enclosure!

MULTIDOOR NEMA 12 PANEL ENCLOSURE

These quantity-produced stock enclosures will save you engineering time and delivery time with assurance of superior quality.

They are manufactured to NEMA 12 and JIC standards and are completely oil-tight and dust-tight. Available in 3, 4 and 5 door models measuring 86" high, 15" deep and up to 15½' long. Made of 10 gauge steel with a strong steel framework inside to provide rigid support. All seams welded, and there are no holes.

A mechanical door interlock is standard, and an electrical interlock is available. Doors have 3-point, roller latches for easy closing. Large interior panels are removable.

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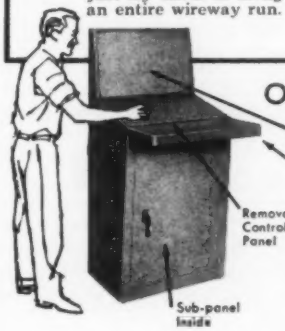
Do you have wire installation problems?

Would you like an easier way to install and modify wiring systems?

The Hoffman oil-tight LAY-IN Wireway is the newest and fastest way of installing wires with protection against oil, dust, dirt and water. You don't *pull* wires thru—you just *lay* them in along an entire wireway run.

USE THIS OIL-TIGHT TIME-SAVING **LAY-IN WIREWAY** (PATENT PENDING)

All covers including fittings are hinged to permit easy laying in of wires and subsequent modification. Covers are gasketed to seal out oil, dust and water. Four standard sizes: 2½" x 2½", 4" x 4", 6" x 6", and 12" x 6" in lengths up to 10' with Elbows, Crosses and other fittings. Made to JIC standards.



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These handsome Hoffman units are immediately available from stock and save you design expense and delivery time. They are flexible in design with optional top section and optional writing desk. Rigid steel construction with welded seams. All panels removable and sealed against oil, dust and water.

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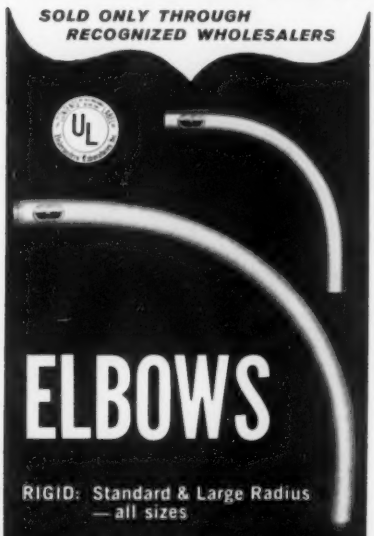

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RIGID: Standard & Large Radius — all sizes

EMT: Standard Radius: 1" to 2" inc.

MOST SIZES OF
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ALWAYS IN STOCK

- True 90° angle for perfect alignment
- Smooth raceways, easy fishing
- Special radius individually marked for on-the-job identifications
- Logical, convenient cartons, clearly labeled
- Large sizes thread protected
- Meets Federal specs. WWC-581C

COMBINE ORDERS FOR ALUMINUM AND STEEL

CONDUIT PIPE PRODUCTS CO.
COLUMBUS, OHIO
ELBOWS • NIPPLES • COUPLINGS • RUNNING THREAD
ALUMINUM AND STEEL

MANUFACTURERS' EXPANSIONS

Rockford, Ill.—Greenlee Tool Co., has announced the opening of a new eastern sales office at 140-40 Queens B'lvd., Jamaica, N.Y.

Elk Grove, Ill.—Erection of a new 200,000-sq ft facility at Elk Grove at a cost of $3 million has been completed by the Sola Electric Co.

Passaic, N.J.—Two new branch offices have been established by The Okonite Co., one in Denver, Colo., the other in Charleston, W. Va.

San Francisco—The Rome Cable Div. of Aluminum Co. of America has moved its northern California distribution center from San Francisco to Utah Construction Co.'s Industrial Park in south San Francisco. The new 25,000-sq ft facility represents a doubling of capacity of its former warehouse.

Salt Lake City, Utah—Westinghouse Electric Corp. has unveiled plans for a multi-purpose facility to be located in the industrial center at 1680 S. Redwood Rd., in this city. The new operation will house the apparatus manufacturing and repair plant, apparatus sales, engineering and service, X-ray marketing, and lamp sales.

Milwaukee, Wis. — Cutler - Hammer Inc., has begun operations in its new plant in the newly developed Belmont industrial area of this city. The plant, which contains more than 35,000 sq ft of floor space, houses the company's manufacturing, sales office and warehouse activities.

Chicago, Ill.—Ace Hardware Corp. has purchased a new warehouse located at 6501 West 65th St., in Chicago—452,000 sq ft of space on one floor plus office areas.

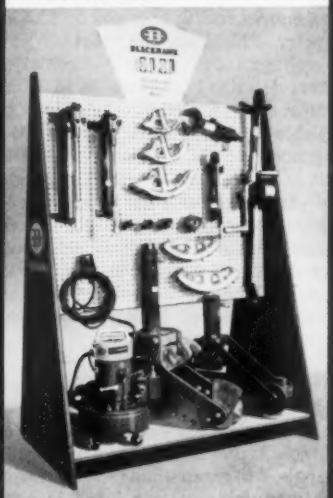
Garwood, N.J.—Diamond Expansion Bolt Co., has announced the opening of a new branch warehouse in Richmond, Va. The new warehouse will serve the areas of Washington, D.C., North Carolina and Virginia.

Los Angeles—Halo Lighting Products, Inc., has moved its West Coast sales offices and warehouse to 1044 Richmond St., Los Angeles.

Lexington, Mass.—Raytheon Company has opened its new headquarters in this city. The move consolidates company activities formerly carried on in 10 separate facilities at Waltham, Brighton, Watertown and West Newton, Mass.

BLACKHAWK®
DISTRIBUTORS
Only

Here's a unique chance to build your electrical tool sales!



TOOL POOL

1. You get a *FREE* Tool Pool display, a sturdy, attractive, professionally designed floor display that would cost you $140.00.
2. You get *FREE* imprinted invitations to send to your customers.
3. You get a Tool Show in your own store.
4. You get the direct benefit of the Blackhawk Territory Manager's selling efforts.

Be sure to get the details from your Blackhawk representative!

BLACKHAWK
INDUSTRIAL DIVISION
BUTLER, WIS.

AHLI Report:

Home Lighting Fixture Sales Survey Issued

Wholesalers report 4.2% increase in sales in '60 over '59.

ELECTRICAL distributors reported a 4.2% sales increase in residential lighting fixtures in 1960 over 1959, according to reports from 15 distributing firms. Distributor figures for any given period always differ from manufacturer figures. In addition, the distributor sample is not as big as the manufacturer sample, although it covers both large and small firms widely scattered over the nation.

Distributors predict an increase of 7.8% in total business for 1961 over 1960.

The industry sales were considered unusually good in view of the home building recession, and in view of the fact that 1960 fixture sales were competing against very high volume recorded in 1959. The 1959 sales showed a 17.9 per cent increase over 1958.

A year ago, most economists and manufacturers were making rosy predictions for 1960, the beginning of what was called "the soaring sixties." Lighting fixture manufacturers were no exception. They expected, at that time, an increase of 14%. The AHLI staff more conservatively predicted a 5% increase. Both predictions, like most other predictions at the beginning of 1960, were high.

Declining home building throughout 1960 represented the strongest depressing factor on the lighting fixture market. Total home starts, including apartments, dropped from 1,500,000 in 1959 to 1,250,000 in 1960.

More rental units and fewer owner-occupied homes was the continuing trend of 1960. For instance, apartment house starts in November of 1960 were 167 per cent ahead of the same month a year earlier. This trend was reported repeatedly in AHLI bulletins, indicating the sales importance of architects, engineers, and apartment house builders as customers.

Principles of Responsibility For Residential Lighting . . .

HOMEOWNERS and renter occupants do not have the knowledge and skills to design their own lighting systems.

Industry, the involved professions, and government have an obligation to provide at least a minimum standard of installed lighting in the nation's homes.

Whenever minimum installations are omitted, on the theory that the occupant of a home

Purchase order follow up is simplified when you can scan at the rate of

10,000 cards per hour.

"Management by exception" is the desired method of following-up purchase orders.

VISIrecord's speed and visibility, to thousands of records at finger-tip control, provides instant information on hundreds of variable factors.

Improper situations show up at a glance — no matter how large the number of orders involved, and permit telephonic action in seconds.

VISIrecord provides split-second speed in management control, in minimum space requirements with normal seated desk level operation.

VISIrecord is equally proficient on machine or hand posted operations — Accounts Receivable, Inventory or Maintenance Control — Edge punched card to tape or Order Writing and hundreds of other systems — anywhere records must be kept and used quickly and accurately.

Your VISIrecord Systems Specialist is ready and able to provide proof of related accomplishments achieved by thousands of satisfied customers.

Meanwhile write for Case Histories and list of satisfied companies in your industry.

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375 PARK AVENUE, NEW YORK 22, N. Y.

See VISIrecord at the Business Equipment Exposition— New York Coliseum, April 17-21. Write us for tickets!

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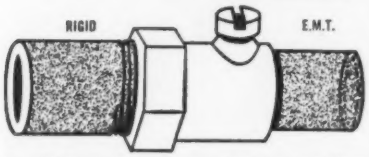
Systems Specialists in Principal Cities

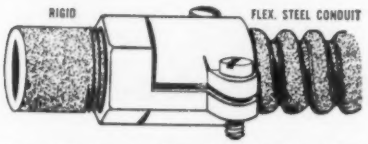
3 NEW TIMESAVERS BY A-S

The world's largest manufacturer of die-cast conduit fittings

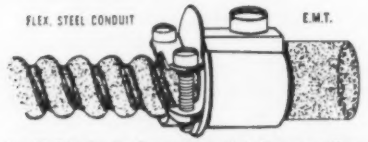
COMBINATION COUPLINGS DO THE WORK OF THREE



Available in 3 sizes: No. 653 for coupling ½" E.M.T. to ½" Rigid or any fitting having ½" male thread. No. 654 for coupling ¾" E.M.T. to ¾" Rigid. No. 658 for coupling 1" E.M.T. to 1" Rigid.



No. 657 for coupling ½" Flexible Steel Conduit to ½" Rigid or any fitting having ½" male thread.



Available in 2 sizes: No. 652 for coupling ½" E.M.T. to ⅜" Flexible Steel Conduit (Greenfield). No. 656 for coupling ½" E.M.T. to ½" Flexible Steel Conduit (Greenfield).

- **EXTRA CONDUIT NIPPLES NO LONGER NEEDED**
- **REDUCES LENGTH OF CONNECTION BY ⅔**
- **STURDY ¼" SCREWS FOR FAST ASSEMBLY**
- **SMOOTH EDGES PREVENT DAMAGED INSULATION**
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- **CONDUIT SLIDES IN EASILY WITHOUT BINDING**

Write or phone for free sample combination couplings and literature

ALLEN-STEVENS
CONDUIT FITTINGS CORP.
34th Ave. & 62nd St., Woodside 77, N.Y.
Telephone DEfender 5-3000

can provide his own lighting so long as receptacle outlets are available, these groups are failing to meet this obligation.

Failure to meet this obligation has created a situation in which the majority of Americans are denied the minimum artificial light needed for health, safety and convenience in their homes.

The most influential standards are those contained in the Minimum Property Standards of the Federal Housing Administration.

Section 603 LIGHT AND VENTILATION of these MPS specifies, without qualification, that "artificial light shall be provided" in habitable rooms, kitchens, in laundry room, utility room and storage rooms, in bathrooms and toilet compartments, and in basements. Added requirements are specified in Section 1007-4 LIGHTING OUTLETS.

However, Paragraph 1007-4.2 asserts: "In other habitable rooms, including living rooms and bedrooms, permanent lighting fixtures wall switch controlled, *or switched receptacle outlet or outlets,* shall be installed." (Emphasis ours)

The italicized phrase contradicts Section 603. It vitiates a major objective of the National Housing Act, namely "to encourage improvement in housing standards and conditions . . . " It is contrary to almost universally-accepted home lighting standards.

We pledge to do everything within our power—through education, promotion, recommendations and counsel—to meet our obligation to the home occupant for adequate-lighting installations.

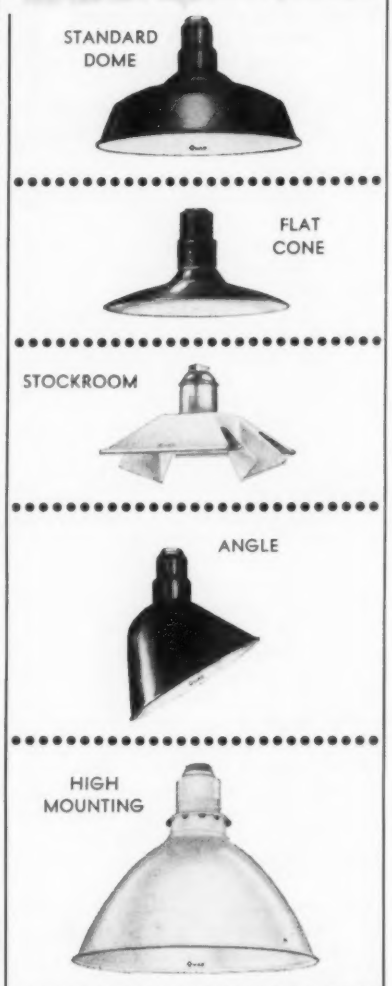
We urge that the phrase, "or switched receptacle outlet or outlets" be deleted from Paragraph 1007-4.2 of the Minimum Property Standards, and that these standards be clarified to require at least minimum standards of installed-lighting fixtures in every room and area.

Distributors Elected To NAED Membership

NEW YORK—Two full-functioning electrical wholesale distributors have been elected to membership in the National Association of Electrical Distributors. They are: Owen Electric Supply Co., 2312 Lapeer Rd., Flint, Mich., and Gorke Electric and Supply Co., Inc., 501 West Fayette St., Syracuse, N.Y.

QUAD REFLECTORS

Be Sure Always...
CHOOSE
the unit best suited for your lighting job—
FROM THESE 5 SHAPES



WRITE FOR
CATALOG NO. 10

QUADRANGLE MFG. CO.
32 S. PEORIA ST.
CHICAGO 7, ILLINOIS

YOU ASKED FOR IT— the May 1960 feature section of Electrical Construction and Maintenance now in a handsome hard-cover book.

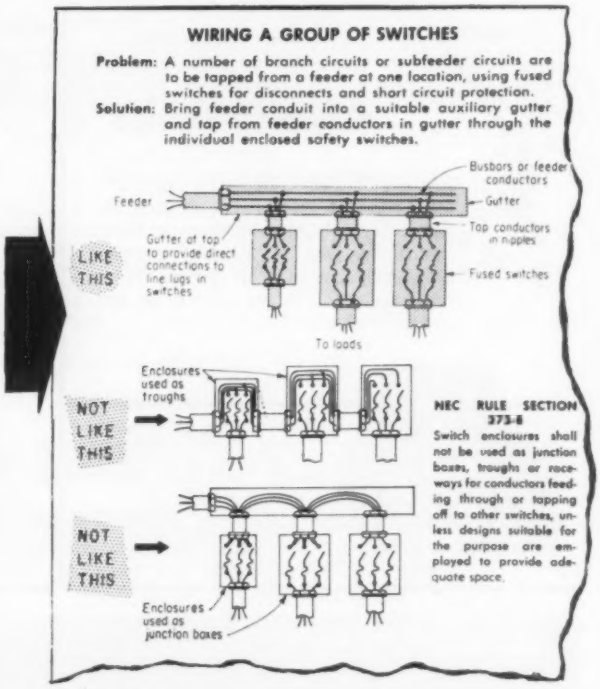
CONSTRUCTING ELECTRICAL SYSTEMS

by J. F. McPartland and the Editors of Electrical Construction and Maintenance

Here's a modern, comprehensive reference and ihstruction manual on the methods and techniques used in constructing systems for power, light, signals and communications. Covering the best practice on selecting, mounting, connecting and housing all types of electrical equipment, **this manual presents *1959 National Electrical Code data* relating to installation. And a wealth of special illustrations are used throughout to clarify fine code points.**

Chapters are broken down on the basis of types of equipment to facilitate ready reference: lighting equipment – motors and controllers – conductors – raceways – switches – overcurrent protective devices – switchboards and panelboards – transformers – capacitors and regulators – power sources – high voltage – signals and communications.

SALESMEN – Make yourself more valuable to your customers by learning these modern techniques of equipment application and the many code rules associated with installation work. And how about presenting a gift copy of this valuable and unique book to some of your key customers? They'll thank you when they get it and every time they use it. Here's a chance to add a solid extra to the routine selling job.


WIRING A GROUP OF SWITCHES
Problem: A number of branch circuits or subfeeder circuits are to be tapped from a feeder at one location, using fused switches for disconnects and short circuit protection.
Solution: Bring feeder conduit into a suitable auxiliary gutter and tap from feeder conductors in gutter through the individual enclosed safety switches.
Busbars or feeder conductors
Feeder
Gutter
Tap conductors in nipples
LIKE THIS
Gutter at top to provide direct connections to line lugs in switches
Fused switches
To loads
Enclosures used as troughs
NOT LIKE THIS
NEC RULE SECTION 373-6
Switch enclosures shall not be used as junction boxes, troughs or raceways for conductors feeding through or tapping off to other switches, unless designs suitable for the purpose are employed to provide adequate space.
NOT LIKE THIS
Enclosures used as junction boxes

CONTENTS

General Considerations
Luminaires and Lighting Equipment
Motors and Controllers
Conductors
Raceways
Switches
Overcurrent Protective Devices
Switchboards and Panelboards
Transformers
Capacitors and Regulators
Power Sources
High Voltage
Signals & Communications

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CONGERS, N. Y.
Feather-Touch Control

A 2

"Electronics—What It Means to the Industry"

Where does electronics fit into the electrical industry? Here is what R. M. Johannesen, president, Johannesen Electric Co., Inc., Greensboro, N.C. said about the subject at the recent Third Biennial Electrical Trade Conference in Washington, D.C.

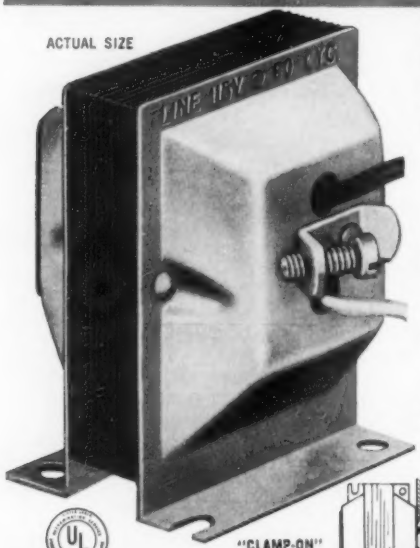
IT seems that everyone is more conscious of this 'Electronic Age' than we — the electrical industry — the very ones who should be the most conscious of it.

". . . Military requirements continue exceedingly large, but the big push today is in industrial electronics. Automation in industry has made the old methods of controlling machinery obsolete in many cases, and electronics is taking over. However, there is tremendous competition for this new market, there are too many companies competing for the business, and the industry seems to be in for a couple of years of shakeouts, mergers tightening of controls and expenditures, and general turmoil.

"One man with many years experience in the business states that by mid-1962, at least half of the present electronics manufacturers will either go out of business, be absorbed by larger companies, or merge.

LOW VOLTAGE
NEWEST IN TRANSFORMERS
FOR BELLS, BUZZERS, CHIMES, DOOR OPENERS, OIL BURNERS AND OTHER USES

ACTUAL SIZE



The **NEW LINE** of Trine high efficiency **TRANSFORMERS** are full-powered — have a low "no-loss" current drain. Heavy gauge steel case, with rust-resistant aluminized finish assures durability. Compact, streamlined design.

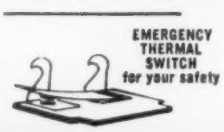
NEW 6 MODELS

are equipped with an **EMERGENCY THERMAL SWITCH** to prevent overload and burnout. "Clamp-on" models have a quick-mount screw bracket for easy mounting to outlet, switch and fuse boxes. All UL APPROVED.

Available in
"CLAMP-ON" TYPE and "SURFACE" TYPE
10 volt, 16 volt, 24 volt and tri-volt

Write for literature and prices.

"CLAMP-ON"
SCREW
BRACKET
for easy mounting

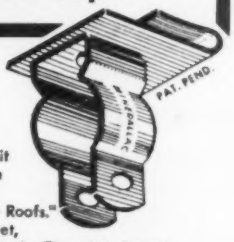


EMERGENCY
THERMAL
SWITCH
for your safety

Booth 339—NAED Convention

TRINE MANUFACTURING CORP., NEW YORK 61, N. Y.

MINERALLAC
STEEL
Min-A-Clips
and
Stud Clips



Min-A-Clip
The most efficient and economical method available for installing Conduit or Pipe on Bulb Tee Irons of "Poured Gypsum Deck Type Roofs." Hanger turns on rivet, eliminating many bends. Zinc plated steel.

Stud Clip and Fixture Stud Clip
For mounting 88 or 1900 Outlet Boxes or hanging Fixtures on Bulb Tee Irons. Fixture clip available for either pipe or rod. Zinc plated steel.

Send for Literature and Prices

MINERALLAC ELECTRIC COMPANY
25 North Peoria Street, Chicago 7, Illinois

MINERALLAC

• **Consolidation** — *"Business Week* magazine recently stated the trend toward consolidation is inevitable when 30 or 40 companies are competing for a market. Each of the top ten manufacturers projects its growth on the premise of being able to capture at least 20% of the market, and there aren't that many 20%s to go around.

"This would seem like a good time to stay away from the electronics business, but these unsettled conditions are the very thing that will tend to merge the electrical and electronics industries—in my opinion. Many electronic firms need more capital, and many electrical manufacturers need to diversify their lines—so joining forces in one way or another seems to be a natural thing to do.

"The electrical manufacturers have not been lagging in the electronics field. A number of them have purchased other companies in the past few years, and others have branched out by making some electronic products. Several old and very successful electrical manufacturers have told me recently that their electronics divisions are growing so well it seems likely that in a few years the tail will be wagging the dog.

• **Distributor's Interest — "To a lesser extent electrical wholesalers have shown some interest in electronics lines, and I think more will do so.** Here, too, a recent trend will be a help. The trend is toward more specialization in the industrial electronics field.

Instead of trying to handle everything that the various industrial customers may call for—which is an impossibility today — distributors are cutting down on lines and specializing in certain products. With their existing industrial contacts, many electrical distributors should be in a fine position to pick up a few good lines in the industrial electronics field.

"And what about the electrical contractor and electronics? Here we note a very definite dragging of the feet. Today there are several lines of built-in hi-fi and stereo music and communication systems for the home. Some are made by manufacturers whose business on other products had traditionally come through the electrical wholesaler and contractor. Yet many contractors doing residential work shy away from the sale and installation of these systems. The installation is simple and most residential electrical contractors could sell these systems if they tried. This profitable business will be forced through other channels by default unless more electrical contractors take an interest in it

". . . And what about the electrical contractor doing industrial mainte-

--ACKERMAN–JOHNSON--
EXPANSIVE SCREW ANCHORS
WITH THE SUPERIOR STEEL NUT (threaded cone section)

Insist on the genuine product . . . look for the name ACKERMAN-JOHNSON

The first . . . and *the very best* in Expansive Screw Anchors! Easily and quickly installed, and provides an exceedingly secure and most rigid anchorage . . . of *great holding power.* And once it's anchored, it remains firm indefinitely; even if fixtures are removed and replaced many times. Our hard steel threads require no thread protection; there are no die cast threads to gall or strip.

Saves time and money in installation . . . requires holes of lesser depth, and shorter length screws.

Distributes strain on wall equally in all directions . . . lessens danger of breakage or fracture.

NOTHING HOLDS AS WELL AS ACKERMANS

Write for new catalog covering Complete Line of Fastening Devices

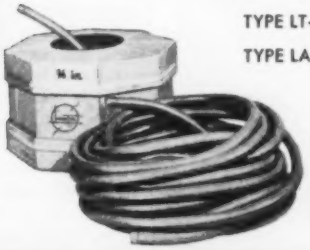
Ackerman-Johnson Co.
625 WEST JACKSON BLVD., CHICAGO • 55 PARK PLACE, NEW YORK
ORIGINATORS OF THE EXPANSIVE SCREW ANCHOR

All the installation speed of Flexible Conduit . . . All the protection of Rigid Conduit . . . with

LIQUATITE®

Extruded Polyvinyl Jacket Molded to Galvanized Flexible Conduit

Complete protection against any and all contamination—impervious to water, oils, chemicals, corrosive atmospheres. Installed in minutes. No more "down-time" due to wiring shorts or burn-outs, no more periodic wiring replacements.



TYPE LT—JIC Approved
TYPE LA—Underwriters' Approved

Write for free sample, costs and name of Distributor nearest you.

ELECTRI-FLEX COMPANY
P. O. BOX 128-A • ROSELLE, ILLINOIS

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TRANSFORMER HANGERS

● Thiel Hangers are made to NEMA specifications. Heavy gauge steel construction, hot-dip galvanized for dependable service and long life. Two styles complete with galvanized bolts and nuts stocked for immediate shipment.

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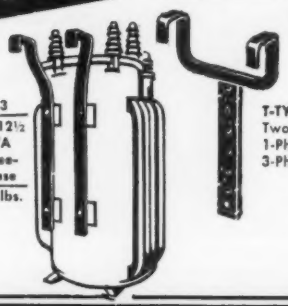

MODEL	C-1	C-3
Transformer	75-100 KVA Single-Phase	75-112½ KVA Three-Phase
Weight	46 lbs.	100 lbs.

T-TYPE HANGERS
Two sizes, for 3-50 KVA 1-Phase and 9-45 KVA 3-Phase transformers.

HANGER KICKERS
Sizes to fit T-Type hangers.

FASTENERS
For Electricians Refrigerator Men Plumbers . . .
Pat. No. 2632356

EASY-ON STRAPS
New "Grip Type"-Snaps on

EASY-DRIVE "NAIL-IT" STRAPS
New Hump
Pat. No. 2885169
Will not break or Pull out.

Electrical Fasteners That Hold . . .

#545 C Adapter Plate-Upper
#546 C Adapter Plate-Lower
167 KVA Transformers

#260 CLEVIS PRIMARY HUMPED SIDES
For 4,000 Volt or Medium Voltage Primaries at Dead Ends.

DEAD END EXTENSION BRACKET WITH #240 CLEVIS
Dead End Primary at Pole. Withstands 3,000# load maximum. Uses a minimum of space on pole.

SECONDARY CLEVIS #240
For use with Secondary Extension Bracket or Direct Pole mounting.

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1417 N. MARKET ST. LOUIS 6, MO.

nance and change-over work? How long can he avoid those jobs involving electronic knowledge and equipment, and still retain his acceptance with his industrial customers? In many cases there is not enough of this work yet to have an electronics service man on the payroll regularly, but I believe contractors could make favorable arrangements with competent electronic service men if they tried—and I think such an arrangement could be mutually satisfactory.

• **Low Man**—The electrical dealer seems to be low man on the totem pole in many committees tod y. Could some of the new electronic marvels of the future elevate him to his previous position in the industry? It could be! We hear talk of electronic ranges and other kitchen marvels. He could also sell those built-in sound systems. . .

". . . Electric leagues and electric power companies should keep dealers informed of all such new products as they become available, so that our electrical appliance dealers will have every opportunity to promote and sell these new products of the future.

• **Close Watch**—"The architect, the engineer, the electric utility, will all find themselves more and more involved in electronic as well as electrical problems from now on. Each individual company must decide for itself as to what extent it should

Multi gives you all that's new in
ALZAK ALUMINUM FLOODLIGHTS
ENCLOSED ANGLE TYPE

TYPE A MOUNTING
CAT. NO. 7200A

TYPE D MOUNTING
CAT. NO. 7200D

TYPE B

VARIETY OF MOUNTINGS CUT INSTALLATION TIME

TYPE C

TYPE E

Semi or fully enclosed type for 500-1500 watt incandescent or 400 watt Mercury Vapor Lamps. These Multi floods are quality produced to assure maximum light output. Reflector is spun aluminum Alzak finish. The heat and impact resistant lens and cable entrance are water-tight. Lens is hinged and secured by stainless steel spring clamps. All mountings malleable iron plated. Rotation stop, protractor and locking lever. Write for literature on complete Multi-Nepo line of floods, luminaries, poles, fittings, mountings, etc.

MULTI ELECTRIC MFG. INC.
4223 W. LAKE ST. CHICAGO 24

Our 17th Year

Serving the Electrical Industry—STRINGER Safety Equipment

Offering the most complete line and the finest quality safety equipment obtainable, STRINGER at the same time offers a very attractive discount plan to the electrical wholesaler. Let us explain this plan; write today for free catalog of this *COMPLETE* line.

UTILITIES SAFETY SUPPLY CO., INC.
Lee's Summit, Mo.

branch out into electronics.

"We must watch the parade of progress more closely than we have in the past—because it now moves so fast we will miss something important if we don't. **And what we watch is very likely to be a part of the electronics and electrical business, for someone."**

NYS Gives OK To Antitrust Violators on State Bids

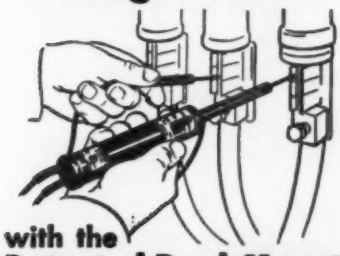
ALBANY, N.Y.—New York State Attorney General Louis Lefkowitz has stated that federal antitrust convictions against electrical equipment companies do not prohibit them from bidding on state contracts.

In reply to a request by state purchasing director Douglas C. Coupe for an opinion, Lefkowitz recalled an earlier ruling that contracts with companies involved in the case should not be held up because of the federal action. "The only new factor is the present request is the entry in the Federal Court of the judgment of conviction against a company and certain of its officers for price fixing in violation of the federal antitrust laws," Lefkowitz said. "This, of itself, would not be sufficient to change my previous opinion."

You'll be happy selling

KNOPP

Voltage Testers



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- *More user-value at Less Cost—* means more turnover for you at good profit margins
- *Five Safety Features—* Knopp Voltage Testers sell themselves
- *Rugged, Reliable—* build goodwill and repeat sales for you

Tell if circuit is open or closed; magnitude of voltage between 110 and 600 a-c or d-c, pure or rectified; 25 or 60 cycles.

Two models. Free Sales Aids. Write today for full details.

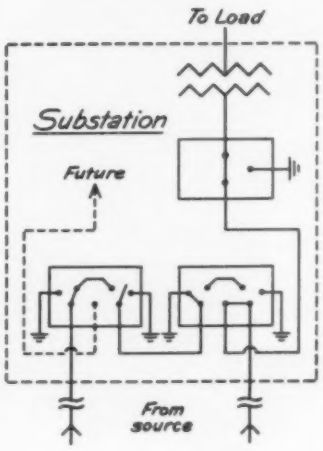
KNOPP INC.

Founded in 1928 by Otto A. Knopp under the name of Electrical Facilities Inc.

Dept. A-12 1307 66th St., Oakland 8, Calif.

GAIN System FLEXIBILITY with G&W Type RAL Load-Break Switches

Standardized Type RAL switches are built expressly for loop-through and tap circuits such as shown here. Any section of the loop can be isolated by these switches or any load or main tapped off the loop can be bypassed without affecting service to remainder of the loop.



G&W Type RAL switches are standardized, which means faster and more dependable delivery as a result of assembly from factory component stock. These switches are available in two voltage ratings, 7.5 and 15 kv and will carry and interrupt full 400-ampere load.

Write G&W for copy of STANRAL Data Sheet giving more information on Type RAL switches.

G&W ELECTRIC SPECIALTY COMPANY
3520 WEST 127th STREET • BLUE ISLAND, ILLINOIS
CANADIAN MFR. • POWERLITE DEVICES LTD.
TORONTO, MONTREAL & VANCOUVER

Superior quality standards — inspired specialized design

D 61-4

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Sell it by the bundle. Add-on profits with every regular sale. Republic METAL LUMBER . . . fastest selling framing material in the trade . . . is ideal for constructing overhead or wall brackets; framework for conduit fixtures, meters.

Bundles come in 10- or 12-foot lengths, complete with bolts and nuts. Send the coupon and start selling today.

I want to know about available distributorships for Republic METAL LUMBER.

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City_____ Zone_____ State_____

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BERGER DIVISION
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FOR IMMEDIATE SHIPMENT

• Contractors, Industrials, and Utilities rely on the accuracy of these Bus Supports to meet exacting service conditions. Available for Indoor and Outdoor Service — flat or pipe mounting. Conform to NEMA standards. POWERCRAFT invites your inquiries on any special Bus Support requirement. Other POWERCRAFT Products . . . Indoor and Outdoor Disconnecting Switches, Bus Clamps, Power Connectors, Pipe Frame Fittings for 1¼″ I.P.S. Pipe, and Clamp Insulator Supports.

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U-1427

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MANUFACTURING COMPANY

MODINE ELECTRIC UNIT HEATERS

Here's a *high-profit* line . . . loaded with sales appeal! Modine electric unit heaters respond *instantly* to thermostat or manual switch. They're safe, clean, quiet, compact, easy to install and maintain. Ideal for countless commercial and industrial heating jobs. Also supplementary *residential* heating . . . basements, garages, etc. Seven sizes . . . from 17,065 to 85,325 Btu/hr.

FOR DETAILS call your Modine representative . . . listed in the yellow pages. Or write Modine Manufacturing Co., 1614 DeKoven Avenue, Racine, Wis.

William M. Jewell

William M. Jewell, Western Region Manager for the National Association of Electrical Distributors, died suddenly on March 13, 1961, in San Francisco. He was 66 years old. Jewell was named Manager of the NAED Western Region in October 1953. His offices were located in San Francisco. Jewell spent most of his business career with Westinghouse Electric Supply Company. Up until the time of his retirement from WESCO in 1952, he had spent 38 years with that company. He began his career in Washington, D. C., and, from there, was transferred to Richmond, Va. He made successive moves to Detroit Mich., where he was manager of the central district of WESCO, and to San Francisco. He was appointed district manager in Seattle, Wash., in 1943 and remained in that position up until his retirement.

John Edward McAuliffe

John Edward McAuliffe, founder and Chairman of the Board of the Triangle Conduit & Cable Co., Inc. of New Brunswick, N. J. died Saturday, March 11, at his winter home at 1430 North Lake Way, Palm Beach,

RED SYNTHETIC INSULATING VARNISH®

Laboratory Tested and Proven

Quick-drying—tough — flexible — oil and waterproof film for outstanding adhesion.

Dielectric strength 1000 volts / mil (ASTM-D149).

Superior Coverage
Possesses outstanding arc resistance and non-tracking properties.

End uses: Ideal for windings, coils, switchboard parts, commutator ends, bus bars. Suitable for end shields and frames in need of a protective coating, also as a sealer for oil, water and gas pipe connections.

CHAMPION BRONZE POWDER & PAINT CO.
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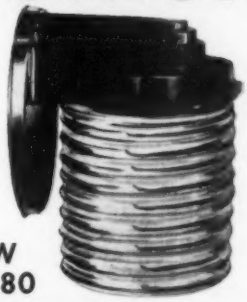
Dept. EW

WHEN PRICE is an object !

LOOK AT WHAT YOU GET FROM UNION



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NON-CORROSIVE !
NON-STAINING !

COMPETITIVELY PRICED!

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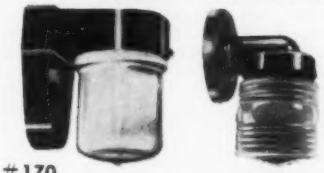


#170 #178

KEEP PACE WITH ELECTRICITY

#190

U. L. LABELED

UNION INSULATING CO.
PARKERSBURG, WEST VIRGINIA
SEE US AT BOOTH # 127

Fla. He was 69 years old. Mr. McAuliffe's death after a lengthy illness ended parallel careers in sports, politics, and industry that covered almost half a century. Brooklyn-born, McAuliffe founded Triangle in 1916 which grew to a four-plant operation. He was also Chairman of the Board of Triangle Conduit & Cable (Canada) Limited.

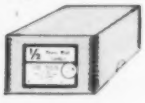
S. C. McCamy

S. C. McCamy, secretary-treasurer and partner of the Roden Electrical Supply Co., Knoxville, Tenn. died on February 6, at his home in Knoxville. McCamy came to Knoxville from Atlanta in 1936 and went into business with H. D. Roden. He was active in the business until the time of his death.

Who said the age of miracles is past? Not with something new on the market called Sonic-Thesia! What is Sonic-Thesia? It's an effective method of sitting through a dental session and emerging with nervous system intact, eyes shining and teeth completely repaired—without a pain in the process! Honest!

THEY STAY ON.....
All VICTOR "MAGIC" CLAMPS and STRAPS for Thin and Heavy Wall Conduits have this time-saving snap-on feature.

Contractors everywhere are switching to VICTOR. Cash in on this heavy demand. Add these fast selling, profitable Clamps and Straps to your line.



VICTOR products are neatly packed, clearly and attractively labelled. Orders for stock items shipped within 24 hours.

Write for the new Victor Strap Catalog. Lists over 600 items to fasten Wire, Cable, Tubing and Conduit.

VICTOR SPECIALTIES, INC.
775 MAIN ST., NEW ROCHELLE, N.Y.
The Greatest Single Source for Clamps and Straps

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AGENTS WANTED · LINES WANTED
POSITIONS WANTED · BUSINESS OPPORTUNITIES

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The rate for Employment is $16.00 per inch for advertising appearing on other than a contract basis. Contract rates quoted on request. Subject to Agency Commission

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An advertising inch is measured 7/8" vertically on a column—3 columns—30 inches to a page

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$1.80 per line minimum 3 lines. To figure advance payment count 5 average words as a line.

Box numbers—counts as 1 line

Position Wanted ads are ½ the above rate.

Discount of 10% if full payment is made in advance for 4 consecutive insertions

Send NEW ADS or Inquiries to Classified Adv. of ELECTRICAL WHOLESALING P. O. Box 12, New York 36, N. Y. for May issue closing April 13th.

TENDERS

Tenders are invited for the supply of all or any of the following:—

1. Low Voltage Cables.
2. 12 kV Switchgear and Accessories.
3. P.V.C. Multicore Cables.

Specifications may be obtained on writing to the Purchasing Officer, Trinidad and Tobago Electricity Commission, P.O. Box 121, Port-of-Spain, Trinidad, W.I.

Closing date for Tenders 15th May, 1961.

ADDRESS BOX NO. REPLIES TO: Box No. Classified Adv. Div. of this publication. Send to office nearest you.
NEW YORK 36: P. O. Box 12
CHICAGO 11: 520 N. Michigan Ave.
SAN FRANCISCO 11: 255 California St.

SELLING OPPORTUNITY AVAILABLE

Salesman Wanted—Competitive complete line conduit fittings with 5 to 40% extra discounts. Commission 5 and 7½%. Territories open. Write giving full particulars. SW-5900, Electrical Wholesaling.

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An individual, presently employed in large agency, wants opportunity to represent in the State of Michigan one or two manufacturers. Straight commission—Real representation. RA-6169, Electrical Wholesaling.

Mfr's Rep. Metropolitan New York and New Jersey seeks additional High Caliber Lines for Electrical Wholesale Distributors. RA-6206, Electrical Wholesaling.

Mfr's Rep. desires quality line metropolitan N.Y. area. Contacts among electrical wholesalers and specifying firms. RA-6382, Electrical Wholesaling.

Mfr's Rep. ten years experience calling on Supply house, contractors, and engineers desires quality lines for Kentucky & Tennessee. I can get you results. RA-6259, Electrical Wholesaling.

FOR SALE

Electrical Fitting Manufacturers: We can furnish you with small malleable castings in large quantities at lower prices than your current costs. We will be pleased to confer with you without obligation. Eastern Metal, 10 Thornton St., Newark, N.J.

Your Inquiries to Advertisers Will Have Special Value . . .
—for you—the advertiser—and the publisher, if you mention this publication. Advertisers value highly this evidence of the publication you read. Satisfied advertisers enable the publishers to secure more advertisers and—more advertisers mean more information on more products or better service—more value—to YOU.

ADVERTISERS' INDEX

A

Accurate Mfg. Co. 20
Ackerman-Johnson Co. 193
Acme Lite Products Co., Inc. 192
Adam Electric Co., Frank 9
Advance Transformer Co. 14
All-Steel Equipment, Inc—
Raco Div. 145
Allen-Bradley Co. 136
Allen-Stevens Conduit Fittings Corp. 190
Allis-Chalmers Mfg. Co. 156, 157
American Biltrite Rubber Co., Boston Woven Hose & Rubber Division 73
Anaconda Metal Hose 167
Appleton Electric Co. Second Cover
Arrow-Hart & Hegeman Electric Co., The 47, 49, 51
Auth Electric Co., Inc. 173

B

Bell Electric Co. 21
Benjamin Div. of Thomas Industries, Inc. 5
Bishop Mfg. Corp. 169
Blackburn Corp. Jasper 64, 65
Blackhawk Industrial Div. 188
Blackhawk Industries 37
Briegel Method Tool Co. 134
Bryant Electric Co. 33, 34, 35, 36
Buchanan Electrical Products Corp. 172
BullDog Electric Products Div. I-T-E Circuit Breaker Co. 159
Bussmann Mfg. Co. Fourth Cover

C

Carlon Products Corp. 183
Carol Cable Co., A Div of the Crescent Co., Inc. 43
Champion Bronze Powder & Paint Co. 196
Champion Lamp Works 84
Chase & Sons Inc. 15
Chase-Shawmut Co., The 142
Circle Wire & Cable a Subsidiary of Cerro de Pasco Corp. 175
Clark Controller Co. 133
Clayton Mark & Co. 147
Collyer Insulated Wire Co. 181
Colorado Fuel & Iron Corp. 168
Conduit Pipe Products Co. 188
Cope Inc., Div. Rome Cable Corp. 68
Cornish Wire Co., A Div. of General Cable Corp. 24, 25
Crescent Insulated Wire & Cable Co., Inc. 62
Crouse-Hinds Co. 41
Cutler-Hammer, Inc. 66, 67

E

Eagle Electric Mfg. Co., Inc. 140
Edwards Co., Inc. 130
Electrical Construction & Maintenance 191
Electrical Fittings Corp. 11
Electrical Mfgrs. Credit Bureau Inc. 58
Electrical Wholesaling 186
Electri-Flex Co. 193
Emerson Electric Mfg. Co. 50
Ettco Wire & Cable Corp. 158

F

Faraday 30
Fostoria Corp. 184
Fullman Mfg. Co. 4
Furnas Electric Co. 166

G

Gedney Electric Co., Inc. 52
General Electric Co.
Lamp Div. 16, 17
Wiring Device Department 82, 83
G & W Electric Specialty Co. 195
Greenlee Tool Co. 78, 79

H

Heinemann Electric Co. 180
Hoffman Engineering Corp. 187
Holophane Co. Inc. 53
Holub Industries, Inc. 170
Hubbell Inc., Harvey 69, 70, 71, 72
Huenefeld Co., The 149

I

Ideal Industries, Inc. 48
I-T-E Circuit Breaker Co. 54, 55
I-T-E Circuit Breaker Co., Walker Div. 31

J

Johns Manville, Dutch Brand Division 76, 77

K

Keystone Mfg. Co. 185
Killark Electric Mfg. Co. 80, 81
Knopp Inc. 195
Kraloy/Chemtrol Co. 178

L

Laclede Steel Co. 163
Leviton Mfg. Co. 152
Line Material Industries 44, 45

M

Mason Co., L. E. 151
Miami Cabinet Division, The Philip Carey Mfg. Co. 179
Milwaukee Electric Tool Corp. 141
Minerallac Electric Co. 192
Modine Mfg. Co. 196
Multi Electric Mfg., Inc. 194
Murray Mfg. Corp. 165

N

Nikoh Tube Co. 161

O

Okonite Co., The 131
O. Z. Electrical Mfg. Co., Inc. 32

P

Paragon Electric Co., Inc. 182
Pass & Seymour, Inc. 154, 155
Penn-Union Electric Corp. 27
Pfaff & Kendall 174
Phelps Dodge Copper Products Corp. 56, 57
Phoenix Products Co. 150
Plymouth Rubber Co., Inc. Third Cover
Porcelain Products, Co. 42
Powercraft Corp. 196
Pyramid Instrument Corp. 12, 13

Q

Quadrangle Mfg. Co. 190

R

Rawlplug Co., Inc., The 146
Republic Steel Corp. 195
Revere Electric Mfg. Co. 129
Ridge Tool Co., The 153
Rockbestos Products Corp. 28, 29
Rodale Mfg. Co., Inc. 132
Rome Cable Division of Alcoa 171
Royal Electric Corp. 59, 61, 63

S

Sherman Mfg. Co., H. B. 23
Simplex Wire & Cable Co. 1
Slater Electric Inc. 18, 19
Sola Electric Co. 46
Spaulding Co., J. H. 38, 39
Square D Co. 2
Steber Mfg. Co., Division of the Pyle National Co. 143, 148
Steel City Electric Co. 139
Steel & Tubes Div. 195
Sylvania Electric Products, Inc. 74, 75
System Analyzer Corp. 164

T

Theil Tool & Engineering Co., Inc. 194
Thomas & Betts Co. 40
Tomic Sales & Engineering Co. 162
Triangle Conduit & Cable Co., Inc. 22
Trine Mfg. Corp. 192

U

Utilities Safety Supply Co., Inc. 194
Union Insulating Co. 197

V

Vaco Products Co. 26
Victor Specialties Inc. 197
VISIrecord, Inc. 189

W

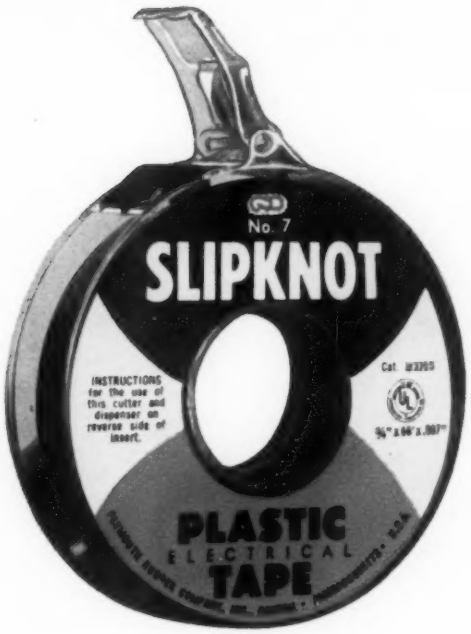
Wadsworth Electric Mfg. Co., Inc. 184
Weaver Co., J. A. 60
Western Insulated Wire Co. 144
Westinghouse Electric Corp. Lamp Division 177
Whitney Blake Co. 160
Wiremold Co., The 7

X

Xcelite, Inc. 176

■

CLASSIFIED ADVERTISING
F. J. Eberle, Business Mgr.
EMPLOYMENT OPPORTUNITIES .. 197
EQUIPMENT
(Used or Surplus New)
For Sale 197



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IN ALL of the 65 years we've been in business, **not one roll** of Plymouth Electrical Tape has ever been sold directly to a user. This is our cardinal rule . . . our inflexible **Distributor Policy** . . .and it helps everyone in the industry. Without our Distributor Policy, costs would increase. Here's how:

- To visit every contractor, dealer and industrial plant, we'd need at least 300 more salesmen.
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- Moreover, users would never get the wonderful service they get now. Our full-functioning distributor stocks plenty of Slipknot Tape, and gets it to the user **fast.**
- To keep abreast of new products and market changes, users would have to see hundreds of additional salesmen every month.
- Repeat business is vitally important to the distributor — and that's why he stocks only the highest quality lines.
- Users would be charged for freight, too — but if they're in a metropolitan free delivery zone, our distributor delivers without charge.

Plymouth Electrical Tapes — Friction, Plastic, Rubber — are the best any user can buy . . . and he **buys best** from his distributor. Neither of us could get along without him.

TAPES BY
SOLD ONLY THRU RECOGNIZED DISTRIBUTORS
PLYMOUTH RUBBER COMPANY, INC.

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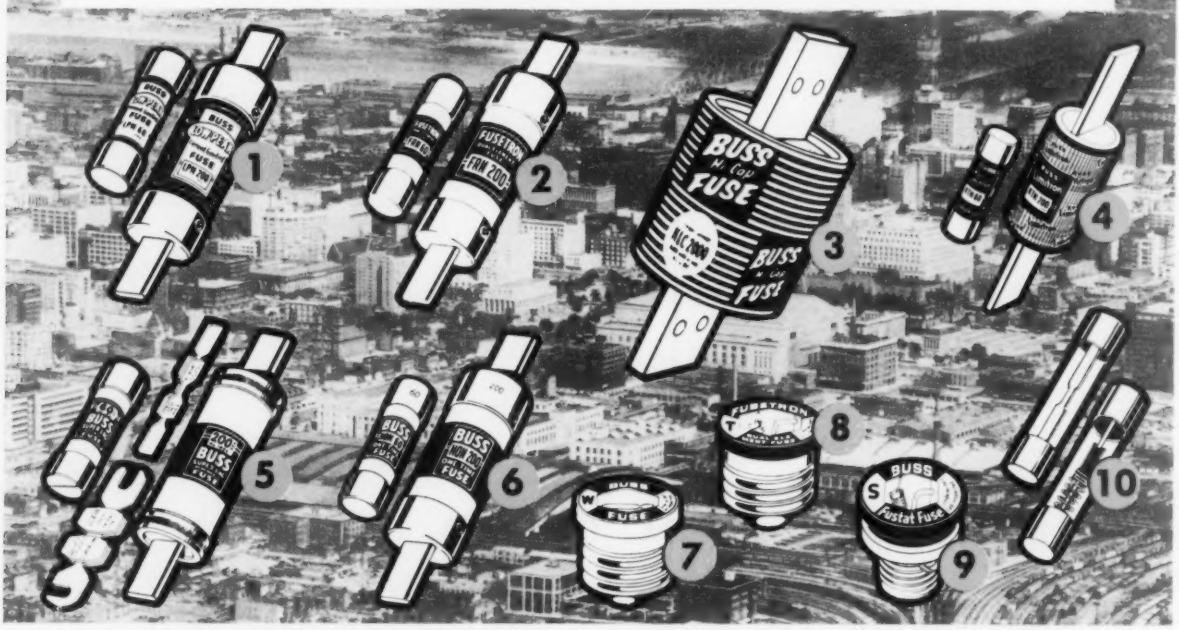
April 30 thru May 4

PLYMOUTH RUBBER COMPANY, INC.
QUALITY SINCE 1896 CANTON, MASSACHUSETTS

When selling Electrical Protection — keep in mind . . .

There's a *Safe and Dependable* BUSS Fuse or FUSETRON Fuse to fit the needs of every user . . .



. . . and fuses provide the highest degree of protection available.

They have no hinges or pivots, latches or contacts to stick or get out of order and possibly fail to function at the very moment when their operation means safety from serious fire and accidental hazards. No periodic inspections, recalibration and corresponding down-time is required. A fuse is just as safe and accurate 20 years or longer after installation as it is on the day installed.

1 **Buss LOW-PEAK fuses.** A great advancement in protective devices. Provide 200,000 amp. interrupting capacity . . . great current limitation . . . plus long time-lag to prevent needless shutdowns . . . at minimum cost. *Ask for Bulletin LPCS*

2 **FUSETRON dual-element fuses.** Have 100,000 amp. interrupting capacity. Eliminate needless blowing of circuit fuses. Protect motors against burnout from overloads or single phasing. Reduce heating in panels and switches. Give thermal protection to panels and switches. Save on service and maintenance costs. *Ask for Bulletin FIS*

3 **Buss Hi-Cap fuses.** For loads above 600 and up to 6,000 amps. Have 200,000 amp. interrupting capacity. High speed operation limits fault currents to safe values. Can be coordinated with FUSETRON or LOW-PEAK fuses to limit outage to circuit of origin. *Ask for Bulletin HCS*

4 **Buss LIMITRON fuses.** Extremely fast opening characteristics prevent heavy short-circuit currents building up under fault conditions. Can be coordinated with FUSETRON or LOW-PEAK fuses to limit outage to circuit of origin. *Ask for Bulletin HLS*

5 **Buss Super-Lag Renewable fuses.** Provide lowest cost protection where periodic short-circuits are expected. Give freedom from needless blows. Greatly reduce out-of-service-losses. *Ask for Bulletin RCS*

6 **Buss One-Time fuses.** Offer most economical protection for circuits where no motors are connected and possible fault current is not over 10,000 amps. *Ask for Bulletin NCS*

7 **Buss Clear Window Plug fuses.** One-piece body and "safety" design guarantee protection. Easy to spot blown fuse, even when light is poor. *Ask for Bulletin WUS*

8 **FUSETRON dual-element Plug fuses.** Safely reduce needless blowing of plug fuses and give full protection against short-circuits and overloads. *Ask for Bulletin TCPS*

9 **Buss FUSTAT fuses.** Have type "S" base which prevents overfuseing or tampering. Protect against short-circuits and overloads. Safely reduce needless blows. *Ask for Bulletin SCPS*

0 to 14 Ampere Buss FUSTAT fuses. Provide simple, low cost way to protect motors and apparatus against burnout on circuits of 125 volts or less. *Ask for Bulletin SMPS*

10 **BUSS and FUSETRON Small Dimension fuses.** Used to protect TV, Radio, Instrument, Radar, Avionic and Electronic Equipment. Complete fuse line includes dual-element "slow-blowing," single-element "quick-acting" and signal or visual indicating types, in sizes from 1/500 amp. up . . . plus a companion line of fuse clips, blocks and holders. *Ask for Bulletin SFB*

When you sell BUSS Fuses, you sell fuses of unquestioned high quality. | BUSSMANN MFG. DIVISION McGraw-Edison Co. St. Louis 7, Mo.